# Industrial Product Catalogue







ISSUE DATE: NOVEMBER 2016

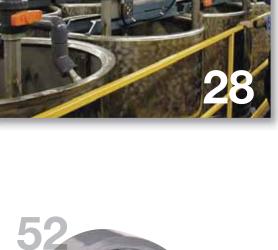
- Process Piping Systems
- Double Containment Systems
- Acid Waste Piping Systems
- Compressed Air Systems
- Thermoplastic Valves
- Specialty Products

We build tough products for tough environments®

# NEUTRATANK Clear-Guard PLENUMLINE Centra-Guard PLENUMLINE Centra-Guard Guardian Encarse ALLINE SYSTEM ENFIELD CustomGuard LABLINE

# to EXCELLENCE

As one of the world's leading manufacturer's of thermoplastic pipe, valves, fittings and related products for plumbing and mechanical applications, IPEX offers a comprehensive range of integrated solutions to meet the needs of engineers and contractors in commercial, institutional, industrial and residential construction.













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MUNICIPAL PRODUCT LINE SHEET

MECHANICAL PRODUCT LINE SHEET

# INDUSTRIAL EASY SPEC

PRODUCT	SIZE RANGE	STANDARDS *	APPLICATIONS
PROCESS PIPING	SYSTEMS	* Consult IPEX lit	erature for individual product listings
Xirtec®140 PVC Schedule 40 & 80	1/4" - 24"	∰) ∰ 155 <b>≩abs</b>	Designed to meet the temperature, pressure and flow requirements of piping systems used in chemical processes, and other industrial applications. Applicaitons include: Plant chemical distribution lines, water and waste water, acid systems for refineries, pickling lines and
Corzan° CPVC Schedule 40 & 80	1/2" - 16"	()))))))))))))))))))))))))))))))))))))	plating shops, chlorine injections, chlorine dioxide and chloralkall plant piping, steel wire plant, irrigation systems, pharmaceutical, and waterworks etc.
Clear-Guard™ Clear PVC Schedule 40	1/2" - 8"	AMSI (ANSI (SS)	Clear-Guard double containment for high purity piping, leak detection, agricultural & aquacultural, chemical processing/blending, healthcare/hospital use, laboratories, environmental, sight gauge assemblies, display/exhibits, and food and beverage processing.
Corzan® HP CPVC Schedule 80	1/2" - 8"	()) (S) U.S. COAST GUARD	Chemical processing, semiconductor and electronics, water treatment, industrial manufacturing, mining, and power generation. Potable water, deck wash system, desalinization and chemical waste, black water, and brine ballast treatment.
Enpure™High Purity PP Schedule 40 & 80	1/2" - 4"	FDA 185	Food processing, hospitals, laboratories, universities, biotechnology, research facilities, chemical manufacturing, photographic chemical processing, effluent treatment, water treatments, and pharmaceutical manufacturing.
Duraplus™ ABS Industrial	3/8" - 12"	ABS ABS	Chilled water/HVAC, Off shore applications, Mining and Secondary loop refrigeration.
DOUBLE CONTAIN	NMENT SYSTEMS		
Guardian™ Vinyl PVC & CPVC	PVC: Carrier 1/2" - 12" Containment 2"-18" CPVC: Carrier 1/2" - 12" Containment 2"-18"	451Þ	Plant chemical distribution lines, water and wastewater, acid systems for refineries, pickling lines and plating shops, chlorine injection, chlorine dioxide and chloralkali plant piping, steel wire plants, battery manufacturing, bleach lines, alum and caustic handling systems, semiconductor, overhead piping for personnel/ property/equipment protection, and hazardous waste systems. Xirtec PVC and Corzan CPVC are the chosen materials for the Guardian systems.
Drain-Guard™ PVC DWV	Carrier: 1-1/2" - 12" Containment 4" - 16"	4511v	Healthcare/Hospital Use, laboratory applications, high-tech and data storage environments (network & server rooms etc.), museums and libraries, historical sites, theaters, restaurants (public areas), and residential buildings. Xirtec is the chosen material for the Drain-Guard system.
Clear-Guard™ PVC	PVC Sch 40 Carrier: 1/2" - 4" Containment 2"- 8"	4510	Plant chemical distribution lines, pharmaceutical, semiconductor, water and wastewater, and overhead piping for personnel/ property/equipment protection. Each containment piping system shall consist of Xirtec PVC or Corzan CPVC primary piping system supported within a Clear-Guard Schedule 40 clear PVC secondary containment housing.
CustomGuard® (Dissimilar Materials)	FRP/Metals/Dissimilar: Carrier 1/2" - 20" Containment 2" - 26"		Plant chemical distribution lines, water and wastewater, acid systems for refineries, pickling lines and plating shops, battery manufacturing, alum and caustic handling systems, pharmaceutical, generator back-up, semiconductor, and hazardous waste systems. Custom-designed and fabricated double containment systems including dissimilar material.
Encase™ Acid Waste PP	PP: Carrier 1-1/2" - 8" Containment 4" - 12"	451))	Corrosive chemical waste for university laboratories, schools, hospitals and industrial plants, and pharmaceuticals facilities.
Centra-Guard <sup>™</sup> Low Point Leak Detection Monitoring System			Above-ground suspended pipeline applications with sensors housed in a saddle type clamp, underground pipeline systems with drip leg assembly.
IPEX PAL-AT Cable Leak Detection Monitoring System	NOT available in Canada		Ideal for buried double containment piping applications that require exact leak location.

PRODUCT	SIZE RANGE	STANDARDS *	APPLICATIONS
CORROSIVE ACID	WASTE PIPING S	YSTEMS	
Enfield™ Electrofusion Joint PP	1-1/2" - 12"	()) (): () () ()) () ()) (	Corrosive chemical waste for university laboratories, schools, hospitals, - industrial plants, and
Labline® Mechanical Joint PP	1-1/2" - 4"	()) (): () () (): (): (): (): (): (): (): (): (): ():	pharmaceuticals facilities.
Plenumline™ Mechanical Joint PVDF	1-1/2" - 4"	()) ()) ()) ()) ()) ()) ()) ()) ()) ())	Corrosive chemical waste for challenging conditions, highly restrictive return air plenum applications, and high-temperature corrosive chemical waste situations.
Floway™ Floor Drains PP	2" - 6"		For efficiently managing chemical spills; designed to feed into IPEX acid waste systems.
Neutratank® PP or PE Neutralization Tanks	1-1/2" - 6"		Corrosive retention tank (with limestone) for the neutralization of chemical waste prior to discharge into the sewer.
Neutrasystem2™ pH Monitoring System	110/120 VAC input 24V DC operating voltage	(II) KEMA	Monitoring pH discharge levels for Neutratank.
COMPRESSED AIF	R SYSTEMS		
Duraplus™ Airline	1/2" - 4"	450	Plant air, ventilation, and valve actuation.
Duratec® Airline	3/8" - 1" NOT available in Canada	()) ()) ()) ()) ()) ()) ()) ()) ()) ())	Plant air, inert gas distribution, manufacturing hand tool operatin, manual and automated welding operations, semi-conductor tool hook up, valve actuation - control systems, microbulk inert gas delivery, and robotic installations.
SPECIALTY PROD	UCTS		
Ventilation Duct (PVC & CPVC)	6" - 24"	()) (C) (N)	Industrial venting systems.
PVC Well Casing	2" - 16"	€∏) NSF	Well drop-pipe, and submersible pumps.
Roll Grooved PVC Pipe Schedule 40 & 80	2" - 12"		Can be used in any application where PVC pipe is acceptable and where it is desireable to have a quick assembly under adverse conditions.

# INDUSTRIAL EASY SPEC THERMOPLASTIC VALVES

PRODUCT BALL VALVES	SIZE RANGE	UP TO PRESSURE * * Consult IPEX literature for specifi	APPLICATIONS
VKD Series †	3/8" - 4"		Ball valves are generally used for on/off service, but can
EasyFit VXE Series †	1/2" - 6"	232 psi @ 73°F (1600 kPa @ 23°C)	range from simple molded-in-place construction to high- end industrial designs with many features and benefits.
EasyFit VEE Series	1/2" - 4"		Multi-port ball valves allow for mixing, diverting, and
MP Series	1/2" - 2"	150 psi @ 73°F (1034 kPa @ 23°C)	bypassing flow.
TKD Series 3-Way +	1/2" - 2"		Multi-port ball valves allow for mixing, diverting, and bypassing flow. Extensive material options provide for
VKR Series Regulating †	1/2" - 2"		complete chemical compatibility in highly corrosive
Vented VKD Series +	3/8" - 4"	232 psi @ 73ºF (1600 kPa @ 23ºC)	processes. Many ball valves feature full port flow, blocking true union ends, and compact ergonomic designs
Vented Easyfit VXE Series +	3/8" - 6"		allowing for simple installation and maintenance.
BUTTERFLY VALVES		* Consult IPEX literature for specifi	c pressure ratings
FK Series †	1-1/2" - 12"		These highly versatile valves can be used for simple on/off service but also for processes requiring throttling.
FK Series Lugged †	2-1/2" - 12"	150 psi @ 73°F (1034 kPa @ 23°C)	End-of-line installation of the lugged version allows for downstream piping disassembly with the upstream system still under pressure. The extensive size range and material availability make them applicable in a wide range of
FE Series †	1-1/2" - 12"		applications. With simple, direct mounting for actuation, automated process control can be easily achieved.
DIAPHRAGM VALVES		* Consult IPEX literature for specifi	c pressure ratings
VM Series	1/2" - 4"		Diaphragm valves are ideal for processes requiring precise flow throttling. The weir style design - no dead space in the
VM Series Pneumatic	1/2" - 4"	150 psi @ 73°F (1034 kPa @ 23°C)	valve - is extremely good for abrasive slurries, high purity water and potentially off gassing chemicals such as sodium hypochlorite. Styles range from compact and direct acting
DV Series	1/2" - 6"		to high end industrial design with many features and benefits. Diaphragm valves are available in both manual
CM Series Compact	1/2" - 3/4"	90 psi @ 73°F (621 kPa @ 23°C)	operation and pneumatic operators. These valves are widely used in high purity applications
CM Series Compact Pneumatic	1/2" - 3/4"		because their design prevents friction and subsequent particle creation when cycling. Many body and diaphragm
DM Series	1/2" - 2"	115 psi @ 73°F (793 kPa @ 23°C) depending on available control pressure	material options are available as well as simple pneumatic actuation.
CHECK & VENT VALV	/ES	* Consult IPEX literature for specifi	c pressure ratings
SXE Series Ball	1/2" - 4"	232 psi @ 73°F (1600 kPa @ 23°C)	Check valves should be used whenever there is a need to prevent back-flow of process media. IPEX offers high
SSE Series Spring Assisted	1/2" - 4"		efficiency ball and piston checks as well as heavy duty swing check valves.
VR Series Piston	1/2" - 4"	232 psi (1600 kPa) depending on size	swing checks, and highly efficient piston checks. These
SC Series Swing	3" - 8"	100 psi (690 kPa) depending on size	valves are typically gravity operated and require very little back pressure to seal. Air release valves safely allow any entrapped air or gas to escape, avoiding damage to the
VA Series Air Release	3/4", 1-1/4" & 2"	232 psi (1600 kPa)	piping system.
SPECIALTY VALVES		* Consult IPEX literature for specifi	c pressure ratings
RV Series Sediment Strainers	1/2" - 4"	232 psi (1600 kPa) depending on size	Sediment strainers trap suspended particles flowing in the process line, ensuring that downstream components are
S12/22 Series 2-Way Solenoid	1/4" - 1/2"	90 psi (621 kPa)	protected. Solenoids are ideal for high-cycle applications where
VV Angle Seat	1/2" - 2"		remote operation and precise control are important.
LV Series Lab	1/4"	150 psi @ 73°F (1034 kPa @ 23°C)	on/off requirements.
VALVE ACTUATION		* Consult IPEX literature for specifi	c pressure ratings
Automation is an ideal solution for When valves are remotely locate and adjustment, actuation is the	ed, or the proces		Pneumatic and electric actuators can be easily fitted on our ball, multi-port, and butterfly valves. IPEX offers quarter turn automation solutions for valves from 3/8" to 12" with a variety of standard and optional accessories.

+ Pneumatic and Electric Actuation is available

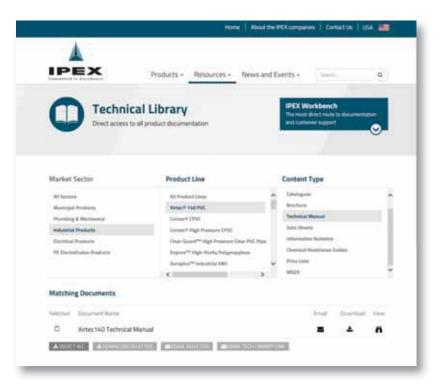
### PHYSICAL PROPERTIES PVC (POLYVINYL CHLORIDE) CPVC (CHLORINATED POLYVINYL CHLORIDE)

	MATERIALS							
PROPERTIES	PVC	CPVC (STANDARD)	CORZAN CPVC (HIGH IMPACT)	STANDARDS				
Cell classification	12454	23447	24448	ASTM D1784				
Specific gravity	1.42	1.50	1.51	ASTM D792				
Tensile strength, psi at 73°F	7,000	7,500	7,320	ASTM D638				
Modulus of elasticity tensile, psi at 73°F	400,000	380,000	423,000	ASTM D638				
Flexural strength, psi	14,500	11,400	13,200	ASTM D790				
Izod impact, ft.lbs./in. at 73°F, notched	0.65	2.0	10.0	ASTM D256				
Compressive strength, psi	9,000	10,100	10,100	ASTM D695				
Poisson's ratio	0.38	0.33	0.33					
Working stress, psi at 73°F	2,000	2,000	2,000					
Coefficient of thermal expansion in. /in. /°F (x 10 <sup>-5</sup> )	3.0	3.8	3.4	ASTM D696				
Linear expansion, in. /10°F per 100' of pipe	0.36	0.44 - 0.46	0.41					
Maximum operating temperature under pressure	140°F (60°C)	200°F (93°C)	200°F (93°C)					
Deflection temperature under load, °F at 66 psi	173	n/a	n/a	ASTM D648				
Deflection temperature under load, °F at 264 psi	160	212	239	ASTM D648				
Thermal conductivity, BTU.in. /hr.ft².°F	1.2	0.95	0.95	ASTM C177				
Burning rate	Self extinguish	Self extinguish	Self extinguish	ASTM D635				
Burning class	V-0	V-0	V-0	UL-94				
Flash ignition, °F	730	900	900					
Limited oxygen index (%)	43	60	60	ASTM D2863-70				
Water absorption, %, (24 hrs. at 73°F)	0.05	0.03	0.03	ASTM D570				

\* The properties listed in this table represent general material properties and should be used as a guideline only.

# **IPEX TECHNICAL MANUALS** available at www.ipexna.com

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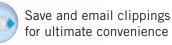
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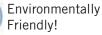


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IPEX offers a comprehensive range of integrated process piping systems – pipe, fittings, flanges, strainers and valves in PVC, CPVC, polypropylene and ABS – designed to meet the temperature, pressure and size requirements of a wide range of chemical processing and similar industrial applications.

In addition to costing less than common and exotic metal systems, IPEX thermoplastic process piping systems are lightweight, as well as easy to handle, store, cut and join, so transportation and installation cost are substantially lower.

When you specify a high-performance process piping system from IPEX, you get the added benefits of a complete piping solution that is engineered for total integration, and backed by comprehensive, coast-to-coast support – all from one reliable source.

# Process Piping Systems



Xirtec PVC & Corzan CPVC	2
Clear-Guard Clear PVC Pipe	26
Enpure High Purity	28
Duraplus ABS Industrial	36

## XIRTEC PVC & CORZAN CPVC

PVC Sch 40 - 1/2" - 24" (12mm - 600mm) PVC Sch 80 - 1/4" - 24" (6mm - 600mm) CPVC Sch 40 & 80 - 1/4" - 16" (6mm - 400mm)

## Xirtec140 CORZAN

#### THE IPEX SYSTEM ADVANTAGE

IPEX vinyl process piping systems; a complete line of pipe, fittings, flanges, strainers and valves to meet all your process system requirements.

IPEX developed the Xirtec®140 (PVC) and Corzan® (CPVC) systems to meet industry demands for a complete Pipe, Valves and Fittings (PVF) package that is designed, produced and backed by a single manufacturer. These systems are engineered and manufactured to IPEX's strict quality, performance and dimensional standards, and therefore eliminate the problems inherent in purchasing and installing piping system components manufactured by several different companies.

IPEX high-performance vinyl systems are designed to meet the temperature, pressure and size requirements of piping systems used in chemical processes and other industrial applications. They feature outstanding resistance to photodegradation, creep stress and immunity to oxidation, and are exceptionally suited for use with a wide range of acids, alcohols, salts and halogens. The perfect extended service, low maintenance alternative to common and exotic metal systems.

Xirtec140 pipe and fittings and Corzan pipe are available in Schedule 40 and 80, IPS. Corzan fittings are available in Schedule 80. All pipe and fittings are also available in cast iron sizes for underground applications.

#### **APPLICATIONS**

- Plant chemical distribution lines
- Water and wastewater
- Acid systems for refineries, pickling lines and plating shops
- Chlorine injection, chlorine dioxide and chloralkali plant piping
- · Steel wire plants
- Battery manufacturing
- Bleach lines in textile and paper mills
- Alum and caustic handling systems
- Circuit board manufacturing
- Semiconductor
- Pharmaceutical
- Cooling water and cooling tower systems
- Tailing and slurry lines
- Washwater recovery systems
- Plant water supply
- Brine and seawater systems
- Fish farming
- Waterworks
- Aquariums and swimming pools
- Irrigation systems in golf courses, greenhouses, etc.

#### STANDARDS



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#### ADVANTAGES

#### Lower Installation Costs, Easy Handling

In addition to a lower material cost, Xirtec & Corzan pipe can significantly reduce labour and transportation costs on a typical installation. The reason? They are lightweight, easily handled, stored, cut and joined.

#### **Extended Life**

Xirtec PVC and Corzan CPVC provide years of maintenance free service. Our materials will not rust, pit, scale or corrode on either interior or exterior surfaces. Thermoplastic piping systems in a variety of demanding industrial applications have operated successfully for over 45 years.

#### **3** Superior Underground Performance

Xirtec and Corzan CPVC are immune to damage from naturally corrosive soil conditions as well as electrochemical and galvanic corrosion. This is particularly advantageous in underground installations where galvanic reaction often causes damage to metal piping products.

#### **4** Exceptional Chemical Resistance

The IPEX vinyl systems, including pipe, valves and fittings, provide outstanding resistance to a wide range of chemicals such as most acids, alcohols, alkalies, salt solutions, halogens and more.

#### 5 Improved Flow

Xirtec and Corzan have a substantially lower Roughness Factor than metal and other materials, and since they do not rust, pit, scale or corrode, the interior walls remain smooth in virtually any service.

#### 6 Potable Water Approved

Xirtec140 polyvinyl chloride (PVC) and Corzan chlorinated polyvinyl chloride (CPVC) are suitable for use with potable water as listed with the National Sanitation Foundation (NSF) and CSA International.

#### **Exceptional Temperature Range**

IPEX vinyl systems are designed to meet a broad range of service temperatures. Xirtec has a recommended maximum service temperature of 140°F (60°C) in pressure, with a higher limit of 180°F (82°C) for intermittent gravity flow.

#### **Lower Thermal Conductivity**

8 With a low thermal conductivity factor, IPEX vinyl systems have less heat loss or gain, thus sustaining service temperature more efficiently than metal piping. As a result, pipe insulation needs may be reduced.

#### **Environmentally Responsible**

9 With energy conservation a prime concern, you can rely on the fact that IPEX's manufacturing process for Xirtec and Corzan piping materials requires less than half the energy needed to produce the equivalent size of carbon steel or steel alloy materials.

### DID YOU KNOW?

One of the outstanding characteristics of PVC is its resistance to ignition. This is demonstrated by its flash point of 730°F (388°C), compared to 400°F (204°C) for wood chips.

CPVC offers an even greater fire safety profile than PVC. CPVC's ignition resistance is demonstrated by its flash point of 900°F (482°C), with a low flame spread as well. CORZAN

C P V C

#### **PRODUCT SELECTION CHART**

#### PIPE PRESSURE RATINGS – XIRTEC140 PVC AND CORZAN CPVC

Si	zes	IF	EX schedule 4	D	IF	PEX Schedule 8	30
Diameter	0.D.	Wall Thickness	I.D.	*Max. Pressure 73°F	Wall Thickness	I.D.	*Max. Pressure 73°F
(in.)	(in.)	(in.)	(in.)	(psi)	(in.)	(in.)	(psi)
1/4	.540	-	-	-	.119	.302	1,130
3/8	.675	-	-	-	.126	.423	920
1/2	.840	.109	.602	600	.147	.526	850
3/4	1.050	.113	.804	480	.154	.722	690
1	1.315	.133	1.029	450	.179	.936	630
1-1/4	1.660	.141	1.360	370	.191	1.255	520
1-1/2	1.900	.145	1.590	330	.200	1.476	470
2	2.375	.154	2.047	280	.218	1.913	400
2-1/2	2.875	.203	2.445	300	.276	2.290	420
3	3.500	.216	3.042	260	.300	2.864	370
4	4.500	.237	3.998	220	.337	3.786	320
6	6.625	.280	6.031	180	.432	5.709	280
8	8.625	.322	7.941	160	.500	7.565	250
10	10.750	.365	9.976	140	.593	9.493	230
12	12.750	.406	11.888	130	.687	11.294	230
14	14.000	.438	13.072	130	.750	12.412	220
16	16.000	.500	14.936	130	.843	14.224	220
18	18.000	.562	16.809	130	.937	16.014	220
20	20.000	.593	18.743	120	1.031	17.814	220
24	24.000	.687	22.544	120	1.218	21.418	210

#### **XIRTEC 140 PRESSURE PIPE**

Dime	nsion				PRODU	CT CODE			
inches	mm	PVC Sch 40 White Plain End	PVC Sch 40 White Bell End	PVC Sch 40 Grey Bell End	PVC Sch 80 Grey Plain End	PVC Sch 80 Grey Bell End	CPVC Sch 40 Plain End	CPVC Sch 80 Plain End	CPVC Sch 80 Solvent Bell End
1/2 x 10'	12 x 3m	022600	022603	022004	-	085106	-	-	-
3/4 x 10'	20 x 3m	022633	022604	022011	-	085111	-	-	-
1 x 10'	25 x 3m	022612	022611	022016	-	085114	-	-	-
1-1/4 x 10'	32 x 3m	022608	022674	022027	-	085119	-	-	-
1-1/2 x 10'	40 x 3m	022614	022616	022032	-	-	-	-	-
2 x 10'	50 x 3m	022618	022619	022037	-	-	-	-	-
2-1/2 x 10'	65 x 3m	022621	_	022042	-	-	-	-	-
3 x 10'	75 x 3m	022637	022624	022046	-	-	-	-	-
4 x 10'	100 x 3m	022626	022628	-	085138	-	-	-	-
6 x 10'	150 x 3m	022666	022659	-	085143	-	-	-	-
1/4 x 20'	6 x 6m	-	-	-	085103	-	-	-	-
3/8 x 20'	10 x 6m	-	_	-	085104	-	-	-	-
1/2 x 20'	12 x 6m	022602	022601	-	085101	085108	019300	019203	-
3/4 x 20'	20 x 6m	022677	022607	-	085107	085112	019301	019205	-
1 x 20'	25 x 6m	022606	022610	-	085110	085116	019302	019207	-
1-1/4 x 20'	32 x 6m	022678	022617	-	085117	085122	019303	019209	-
1-1/2 x 20'	40 x 6m	022675	022615	-	085115	085127	019304	019211	019031
2 x 20'	50 x 6m	022679	022620	-	085120	085132	019305	019213	019032
2-1/2 x 20'	65 x 6m	022646	022625	-	085125	085134	019306	019216	-
3 x 20'	75 x 6m	022623	022630	-	085130	085137	019307	019217	019033
4 x 20'	100 x 6m	022627	022640	022040	085140	085139	019308	019219	019256
5 x 20'	125 x 6m	022651	022650	-	085150	-	-	-	-
6 x 20'	150 x 6m	022665	022660	022060	085160	085162	019309	019220	019218
8 x 20'	200 x 6m	022681	022680	022058	085180	085147	019310	019221	019255
10 x 20'	250 x 6m	022691	222690	022061	085190	085192	019013	019222	-
12 x 20'	300 x 6m	022693	022692	022064	085195	085151	019016	019223	-
14 x 20'	350 x 6m	022682	022694	-	085158	085152	-	019228	-
16 x 20'	400 x 6m	022683	022696	-	085153	085155	019226	019229	-
18 x 20'	450 x 6m	022687	022697	-	085159	-	-	-	-
20 x 20'	500 x 6m	022702	022698	-	-	085170	-	-	-
24 x 20'	600 x 6m	022704	022699	-	-	085171	-	-	-

#### FOR XIRTEC 140 PVC SCHEDULE 40 WHITE

#### **†** Fabricated fittings

■ Molded fittings: 150 psi max. working pressure, non-shock @ 23°F (73°F)

#### FOR XIRTEC 140 PVC SCHEDULE 40 GREY

† Indicates fabricated and fiberglass reinforced pipe fittings

▶ Indicates Series 160 Fabricated and Fiberglass reinforced pipe fittings. The maximum continuous working pressure of fittings is 160 psi @ 23°C (73°F) under ideal conditions. no provisions have been made for pressure surges, water hammer, or other conditions which should be considered.

#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 40 WHITE & SCH. 40 GREY FITTINGS

	Dimensio inches	on mm		e Sch 40 Grey e Product Code		Dimensi inches	on mm	Sch 40 White Product Code	•
Tere									
Iee	Soc x Soc x Soc	12	035775	035290	Ked	ucing Tee Soc 1/2 x 1/2 x 3/4	x Soc x Soc 12 x 12 x 20	035789	
$\bigcirc$						1/2 x 1/2 x 3/4	12 x 12 x 20 12 x 12 x 25		-
	3/4	20	035776	035291		3/4 x 1/2 x 1/2	20 x 12 x 25		-
	) 1	25	035777	035292		3/4 x 1/2 x 3/4	20 x 12 x 12 20 x 12 x 20		-
	1-1/4	32	035778	035293		3/4 x 3/4 x 1/2	20 x 12 x 20 20 x 20 x 12		- 035305
	1-1/2	40	035779	035294		3/4 x 3/4 x 1	20 x 20 x 12		033303
	2	50	035780	035295		1 x 1/2 x 1	25 x 12 x 25		_
	2-1/2	65	035781	035296		1 x 3/4 x 1/2	25 x 20 x 12		-
	3	75	035782	035297		1 x 3/4 x 1/2 1 x 3/4 x 3/4	25 x 20 x 20		-
	4	100	035783	035298		1 x 3/4 x 1	25 x 20 x 25		-
	5	125	035784	035299		1 x 1 x 1/2	25 x 25 x 12	035794	035307
	6	150	035785	035300		1 x 1 x 3/4	25 x 25 x 20	035795	035307
	8	200	035786	035301		1 x 1 x 1-1/4	25 x 25 x 20 25 x 25 x 32		035306
	10	250		-		1 x 1 x 1-1/4 1 x 1 x 1-1/2	25 x 25 x 32	035793	-
	12	300	035931	-		1-1/4 x 1 x 1/2	32 x 25 x 12		-
	10	250	-		†	1-1/4 x 1 x 1/2 1-1/4 x 1 x 3/4	32 x 25 x 12		-
	12	300	035787	+ 035303	+	1-1/4 x 1 x 3/4 1-1/4 x 1 x 1			-
	14	350	035788	t 035304	†	1-1/4 x 1 x 1 1-1/4 x 1-1/4 x 1/2	32 x 25 x 25		-
	16	400	-	t -	t	1-1/4 x 1-1/4 x 1/2 1-1/4 x 1-1/4 x 3/4			035311
	18	450	-	t -					035312
	20	500	-	t -		1-1/4 x 1-1/4 x 1			035313
	24	600	-	+ -		1-1/4 x 1-1/4 x 1-1/2			-
						1-1/2 x 1-1/4 x 1/2			-
Тее	Soc x Soc x Fpt					1-1/2 x 1-1/4 x 3/4 1-1/2 x 1-1/4 x 1			-
	<b>1/2</b>	12	035851		_	1-1/2 x 1-1/4 x 1 1-1/2 x 1-1/2 x 1/2			- 035315
	3/4	20	035852	-		1-1/2 x 1-1/2 x 3/4		035801	035316
		25	035853	-		1-1/2 x 1-1/2 x 3/4 1-1/2 x 1-1/2 x 1		035802	035317
	1-1/4	32	035854	-		1-1/2 x 1-1/2 x 1-1/4			035318
6	1-1/2	40	035855	-		1-1/2 x 1-1/2 x 2			-
	2	50	035856	_		1-1/2 x 1-1/2 x 2-1/2			_
	2-1/2	65	035857	_		2 x 1-1/2 x 3/4	50 x 40 x 20		_
	3	75	035858	_		2 x 1-1/2 x 1	50 x 40 x 25		_
U	4	100	035859	_		2 x 1-1/2 x 1-1/2			_
>	3/4 x 3/4 x 1/2		033033	035348		2 x 2 x 1/2	50 x 50 x 12		035319
<u>م</u>		25 x 25 x 12	-	055546		2 x 2 x 3/4	50 x 50 x 12		035320
U	$1 \times 1 \times 1/2$		-	-		2 x 2 x 1	50 x 50 x 25		035321
Z A	1 x 1 x 3/4	25 x 25 x 20	-	035349		2 x 2 x 1-1/4	50 x 50 x 23		-
Ν	1-1/4 x 1-1/4 x 1/2		-	035350		2 x 2 x 1-1/4 2 x 2 x 1-1/2	50 x 50 x 50		035322
	1-1/4 x 1-1/4 x 3/4		-	035977		2-1/2 x 2-1/2 x 1/2			033322
0 U	1-1/4 x 1-1/4 x 1		-	-		2-1/2 x 2-1/2 x 1/2 2-1/2 x 2-1/2 x 3/4			-
	1-1/2 x 1-1/2 x 1/2		-	035351		2-1/2 x 2-1/2 x 3/4 2-1/2 x 2-1/2 x 1			_
Z	1-1/2 x 1-1/2 x 3/4		-	035352		2-1/2 x 2-1/2 x 1 2-1/2 x 2-1/2 x 1-1/4			-
4	1-1/2 x 1-1/2 x 1		-	035353		2-1/2 x 2-1/2 x 1-1/4 2-1/2 x 2-1/2 x 1-1/2			-
U	2 x 2 x 3/4	50 x 50 x 20	-	035355		2-1/2 x 2-1/2 x 1-1/2 2-1/2 x 2-1/2 x 2			-
> L	2 x 2 x 1	50 x 50 x 25	-	035356		3 x 3 x 1/2	75 x 75 x 12		_
	2 x 2 x 1-1/2	50 x 50 x 40	-	-		3 x 3 x 3/4	75 x 75 x 20		-
О Ш						3 x 3 x 1	75 x 75 x 20 75 x 75 x 25		- 035326
⊢ Tee	Fpt x Fpt x Fpt						75 x 75 x 25		
	1/2	12	035844	_	_	$3 \times 3 \times 1 - 1/4$			- 035327
	3/4	20	035845	-		3 x 3 x 1-1/2	75 x 75 x 40		035327
	1	25	035846	_		3 x 3 x 2	75 x 75 x 50		035328
	1-1/4	32	035847			3 x 3 x 2-1/2	75 x 75 x 65		035329
	1-1/4	32 40	035848	_		3 x 3 x 4	75 x 75 x 100		-
	2	50	035848	-		4 x 4 x 3/4 4 x 4 x 1	100 x 100 x 20 100 x 100 x 25		-

∎,+,▶ See page 5 for descriptions

Dimens	sion	Sch 40 White	Sch 40 Gre	1	Dimensi	on	Sch 40 White	-
inches	mm	Product Code	Product Cod	е	inches	mm	Product Code	Product Code
Reducing Tee Soc		(cont'd)		Per	lucing Tee Soc	v Sac v Ent		
4 x 4 x 1-1/4	100 x 100 x 32		_		1/2 x 1/2 x 3/4	12 x 12 x 20	035860	-
4 x 4 x 1-1/2	100 x 100 x 32		- ,		3/4 x 1/2 x 1/2	20 x 12 x 12		-
4 x 4 x 2	100 x 100 x 40		035331		3/4 x 1/2 x 3/4	20 x 12 x 12 20 x 12 x 20		
4 x 4 x 2 4 x 4 x 3	100 x 100 x 30		035332		3/4 x 3/4 x 1/2	20 x 20 x 12		-
5 x 5 x 2	125 x 125 x 50		033332		1 x 3/4 x 1/2	25 x 20 x 12		_
5 x 5 x 3	125 x 125 x 50		-		1 x 1 x 1/2	25 x 25 x 12		-
5 x 5 x 4	125 x 125 x 100		_		1 x 1 x 3/4	25 x 25 x 20		_
6 x 6 x 2	150 x 150 x 50		-		1-1/4 x 1 x 1/2	32 x 25 x 12		-
6 x 6 x 3	150 x 150 x 50		035334		$1 - 1/4 \times 1 \times 1/2$ $1 - 1/4 \times 1 \times 1$	32 x 25 x 25		_
6 x 6 x 4			035335		1-1/4 x 1-1/4 x 1/2			-
8 x 8 x 3	150 x 150 x 100 200 x 200 x 75				1-1/4 x 1-1/4 x 3/4			
			- 035336	+	1-1/4 x 1-1/4 x 1			-
8 x 8 x 4	200 x 200 x 100			+	1-1/2 x 1-1/4 x 1/2			-
8 x 8 x 6 10 x 10 x 4	200 x 200 x 150			+	1-1/2 x 1-1/4 x 1/2 1-1/2 x 1-1/4 x 3/4			-
	250 x 250 x 100				1-1/2 x 1-1/4 x 1			-
10 x 10 x 6	250 x 250 x 150							-
10 x 10 x 8	250 x 250 x 200				1-1/2 x 1-1/2 x 1/2			-
12 x 12 x 4	300 x 300 x 100				1-1/2 x 1-1/2 x 3/4			-
12 x 12 x 6	300 x 300 x 150				1-1/2 x 1-1/2 x 1			-
12 x 12 x 8	300 x 300 x 200				1-1/2 x 1-1/2 x 1-1/4			-
12 x 12 x 10	300 x 300 x 250				2 x 1-1/2 x 3/4	50 x 40 x 20		-
14 x 14 x 6	350 x 350 x 150				2 x 1-1/2 x 1	50 x 40 x 25		-
14 x 14 x 8	350 x 350 x 200				2 x 2 x 1/2	50 x 50 x 12		-
14 x 14 x 10	350 x 350 x 250				2 x 2 x 3/4	50 x 50 x 20		-
14 x 14 x 12	350 x 350 x 300			+	2 x 2 x 1	50 x 50 x 25		-
16 x 16 x 8	400 x 400 x 200			+	2 x 2 x 1-1/4	50 x 50 x 32		-
16 x 16 x 10	400 x 400 x 250		-	+	2 x 2 x 1-1/2	50 x 50 x 40		-
16 x 16 x 12	400 x 400 x 300		· -	†	2-1/2 x 2-1/2 x 1/2			-
16 x 16 x 14	400 x 400 x 350			+	2-1/2 x 2-1/2 x 3/4			-
18 x 18 x 8	450 x 450 x 200			•	2-1/2 x 2-1/2 x 1			-
18 x 18 x 10	450 x 450 x 250				2-1/2 x 2-1/2 x 1-1/4			-
18 x 18 x 12	450 x 450 x 300		· -	•	2-1/2 x 2-1/2 x 1-1/2			-
18 x 18 x 14	450 x 450 x 350	) - 1	· -	•	3 x 3 x 1/2	75 x 75 x 12		-
18 x 18 x 16	450 x 450 x 400	) - 1	-		3 x 3 x 3/4	75 x 75 x 20		-
20 x 20 x 12	500 x 500 x 300	) - 1	-	•	3 x 3 x 1	75 x 75 x 25		-
20 x 20 x 14	500 x 500 x 350		· -	•	3 x 3 x 1-1/4	75 x 75 x 32		-
20 x 20 x 16	500 x 500 x 400	) - 1	-	•	3 x 3 x 1-1/2	75 x 75 x 40		-
20 x 20 x 18	500 x 500 x 450	) - 1	· -	•	3 x 3 x 2	75 x 75 x 50		-
24 x 24 x 14	600 x 600 x 350	) - 1	· -	•	4 x 4 x 1	100 x 100 x 25		-
24 x 24 x 16	600 x 600 x 400	) - 1	-		4 x 4 x 1-1/2	100 x 100 x 40	035893	-
24 x 24 x 18	600 x 600 x 450	) - 1		•	4 x 4 x 2	100 x 100 x 50	035894	-
24 x 24 x 20	600 x 600 x 500	) - 1	-	•	4 x 4 x 3	100 x 100 x 75	035895	-
					5 x 5 x 4	125 x 125 x 100	235026	-
					6 x 6 x 2	150 x 150 x 50	035896	-
					6 x 6 x 3	150 x 150 x 75	235027	-
					6 x 6 x 4	150 x 150 x 100	035897	-
							005000	

8 x 8 x 3

8 x 8 x 4

200 x 200 x 75

200 x 200 x 100

235028

035898

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XIRTEC PVC

A N D

CORZAN CPVC

#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 40 WHITE & SCH. 40 GREY FITTINGS

	Dimension inches	mm	Sch 40 White Product Code	-		Dimer inches	nsion mm		Sch 40 Grey Product Code
90°	Elbow Soc x Soc				90	)° Street Elbow	Spig x Soc		
	3/8	9	-	035108		1/2	12	035544	-
	1/2	12	035519	035109		3/4	20	035545	-
$\langle -\langle \rangle$	3/4	20	035520	035110		) 1	25	035546	035128
	1	25	035521	035111	el	1-1/4	32	035547	-
	1-1/4	32	035522	035112		1-1/2	40	035548	035129
	1-1/2	40	035523	035113		2	50	035549	-
	2	50	035524	035114					
	2-1/2	65	035525	035115					
	3	75	035526	035116					
	4	100	035527	035117	90	)° Street Elbow			
	5	125	035528	035118		1/2	12	035552	035132
	6	150	035529	035119		3/4	20	035553	035133
	8	200	035530	035120		1	25	035554	035134
	10	250	035928	-		1-1/4	32	035555	-
	12	300	035929	-		1-1/2	40	035556	035135
	10	250	035531 +	035121	+	2	50	035557	-
	12	300	035532 +	035122	+				
	14	350	035533 +	035123	+				
	16	400	035534 +	035124	† 91	)° Reducing Elb	OW SOC Y SOC		
	18	450	- +	-		3/4 x 1/2	20 x 12	, 035535	
	20	500	- +	-	$\mathbf{D}$	1 x 1/2	20 x 12 25 x 12	035536	-
	24	600	- †	-		1 x 1/2 1 x 3/4	25 x 12 25 x 20	035978	-
						1-1/4 x 1/2	32 x 12	235029	-
90°	Elbow Soc x Fpt				$\bigcirc$	1-1/4 x 3/4	32 x 12 32 x 20	235025	_
	1/2	12	035506	035101		1-1/4 x 1	32 x 25	035991	-
	3/4	20	035507	035102		1-1/2 x 1/2	40 x 12	235031	-
	1	25	035508	035103		1-1/2 x 1/2	40 x 25	235032	-
	1-1/4	32	035509	035104		2 x 1-1/2	50 x 40	035537	-
	1-1/2	40	035510	035105			00 / 10		
$\bigcirc$	2	50	035511	035106					
	2-1/2	65	035512	-	or	<sup>0</sup> Poducing Elb	OW See y Ent		
	3	75	035589	-	50	0° Reducing Elb			
	4	100	035513	-		1/2 x 3/4	12 x 20	035514	-
					$\bigwedge$	3/4 x 1/2	20 x 12	035515 035516	-
						1 x 1/2 1 x 3/4	25 x 12 25 x 20		-
90°	Elbow Fpt x Fpt				$-\bigcirc$	1 x 3/4 1-1/4 x 1	25 x 20 32 x 25	035517 051007	-
	1/2	12	035538	035125		1-1/4 x 1 1-1/2 x 1	40 x 25	035594	-
	3/4	20	035539	035126		2 x 1-1/2	40 x 23 50 x 40	035518	-
	1	25	035540	035127		2 x 1-1/2	JU X 40	033318	-
	1-1/4	32	035541	-					
	1-1/2	40	035542	-	Si	de Outlet Elbow		Soc	
	2	50	035543	-	<u> </u>	1/2	12	035498	
90°	Street Elbow Mt >								
	1/2	12	035500	-	<u>.</u>			<b>-</b> .	
KA	3/4	20	035501	-	SI	de Outlet Elbow			
()	1	25	035502	-		1/2	12	235033	-
	1-1/4	32	035503	- (/		3/4	20	235034	-
	1-1/2	40	035504	- (	j	) 3/4 x 3/4 x 1/2			-
	2	50	035505	-		1 x 1 x 1/2	25 x 25 x 12	235036	-

∎,+,▶ See page 5 for descriptions

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	Dimensi	on	Sch 40 White	e Sch 40 Gre	y
	inches	mm	Product Code	e Product Co	le
45º FI	bow SocxSc				
	1/2	12	035481	035083	
$\mathcal{O}$	3/4	20	035482	035084	
$\checkmark$	1	25	035483	035085	
	1-1/4	32	035484	035086	
	1-1/2	40	035485	035087	
	2	50	035486	035088	
	2-1/2	65	035487	035089	
	3	75	035488	035090	
	4	100	035489	035091	
	5	125	035490	035091	
	6	150	035491	035092	
	8	200	035492	035094	
	10	250	035492		
	10	300	035926	1 ·	
	12	250	035493		
	10	300	035495		+
	12	300	055494	+ 035096 + 035097	+
	14	400	- 035495		+
	16	400	030490		+
	20	450 500	- 035496	+ - + -	
	20	600	035490	t -	
90° Ra	adius Bends -	6D Sp x S	Sp _	+ 035932	1
D	3/4	20	035396	+ 035009	+
	1	25	035397	t 035010	+
	1-1/4	32	035398	+ 035011	+
	1-1/2	40	035399	t 035012	+
	2	50	035400	+ 035013	+
	2-1/2	65	035401	+ 035957	+
	3	75	035402	+ 035014	+
	4	100	035403	+ 035015	+
	6	150	035404	+ 035016	+
	8	200	-	t n/a	+
	10	250	-	t n/a	+
	12	300	-	t -	†
↓5° Ra	adius Bends -	6D SpxS	Sp		
	1/2	12	-	t -	†
9	3/4	20	035391	t -	+
	1	25	-	t -	+
	1-1/4	32	-	t -	†
	1-1/2	40	035392	+ 035004	+
	2	50	035939	+ 035005	+
	2-1/2	65	-	t -	+
	3	75	035393	+ 035006	+
	4	100	035394	+ 035007	+
	6	150	035395	t 035008	+
	8	200	-	t -	+
	10	250	-	+ -	+
	10	300			

	inches	mm		Product Co	de	Product Co	de
22-	1/2º Radius	Bends - 6D	Sp	х Ѕр			
19	1/2	12		n/a	†	-	+
[[	3/4	20		n/a	t	035000	+
	1	25		035383	t	-	+
0	1-1/4	32		035384	t	-	+
	1-1/2	40		035385	t	035970	+
	2	50		035386	†	035001	+
	2-1/2	65		035387	t	-	+
	3	75		035388	†	035002	+
	4	100		035389	t	035003	+
	6	150		035390	†	-	+

200

250

300

\_

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t

t

t

057502

t

t

t

Sch 40 White Sch 40 Grey

Dimension

#### Hose Adapter Insert x IPS Soc

8

10

12

	1/2	12	035596	-
$\bigcirc$	3/4	20	035597	-
W	1	25	035598	-
U	1-1/4	32	035599	-
	1-1/2	40	035600	-
	2	50	035601	-
	3	75	235037	-
	4	100	235038	-

#### Hose Adapter Insert x Mt

	1/2	12	-	035157
9	3/4	20	-	035158
	1	25	-	035159
$\mathcal{M}$	1-1/4	32	-	035160
H	1-1/2	40	-	035161
0	2	50	-	035162
	2-1/2	65	-	035163
	3	75	-	035164
	4	100	-	035165

ASTM D2609 - Plastic Insert fitting for polyethylene

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300

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#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 40 WHITE & SCH. 40 GREY FITTINGS

	Dimens inches	ion mm	Sch 40 Whit Product Cod			-		Dimension inches	mm	Sch 40 White Product Code		
Cross	Soc x Soc x S	Soc x Soc					Coup	ling Soc x Soc				
	1/2	12	035469		035068			3/8	9	035447		-
$\frown$	3/4	20	035470		035069		$\square$	1/2	12	035448	03	35052
$\langle \rangle$	1	25	035471		035070			3/4	20	035449	03	35053
$\bigcirc \frown \bigcirc$	1-1/4	32	035472		035071			1	25	035450	03	35054
0	1-1/2	40	035473		035072		$\bigcirc$	1-1/4	32	035451	03	35055
	2	50	035474		035073			1-1/2	40	035452	03	35056
	2-1/2	65	035475		035074			2	50	035453	03	35057
	3	75	035476		035075			2-1/2	65	035454	03	35058
	4	100	035477		035076			3	75	035455	03	35059
	6	150	035478	t	035077	+		4	100	035456		35060
	8	200	_	+	_	+		5	125	035457	03	35061
	10	250	-	, †	-	+		6	150	035458		35062
	12	300	-	' †	_	' †		8	200	035459		35063
	14	350	-	1 †	-	+		10	250	035460 -		35064
	14							12	300	035461		35065
		400	-	+	-	†		14	350	035462		35066
	18	450	-	†	-	•		16	400	035463		35067
	20	500	-	†	-			18	450			35933
	24	600	-	†	-			20	500	035464 ·		-
								24	600	035465		-
Reduci	<b>ng Cross</b> S	oc x Soc x So	oc x Soc					27	000	000400		
	8 x 4	200 x 100	-	t	-		Fema	le Adapter Soc	x Ent			
$\frown$	8 x 6	200 x 150	-	t	-			1/2	12	035559	0	35136
$\sim$	10 x 6	250 x 150	-	t	-			3/4	20	035560		35130
$0 \rightarrow 0$	10 x 8	250 x 200	-	t	-			1	25	035561		35138
С <u>-</u>	12 x 8	300 x 200	-	t	-		$\smile$	1-1/4	32	035562		35139
	12 x 10	300 x 250	-	†	-			1-1/2	40	035563		35140
	14 x 10	350 x 250	-	+	-			2	50	035564		35140
	14 x 12	350 x 300	-	+	_			2-1/2	50 65	035565		35141
	16 x 12	400 x 300		+	-				75			
	16 x 12	400 x 350		+				3	100	035566 035567		35143
		400 x 350 450 x 350	-	' †				4				35144
	18 x 14 18 x 16	450 x 350 450 x 400	-		-			5	125	035568		35145
			-	+	-			6	150	035569	U	35146
	20 x 16	500 x 400	-	†	-			8	200	035570		-
	20 x 18	500 x 450	-	†	-		Fema	le Adapter Spig	x Ent			
	24 x 18	600 x 450	-	†	-			1/2	12	_	0	35148
	24 x 20	600 x 500	-	†	-			3/4	20	-		35148
								1	25	-		35149
Counti	<b>1g</b> FptxFpt						$\bigcirc$	1-1/4	32			35150
ooupin	1/2	12	035466						32 40	-		
	3/4	20	035467					1-1/2		-		35152
								2	50	-		35153
	1	25	035468					3	75	-		35155
								4	100	-	U	35156
Reduci	ng Coupling	Soc x Soc					Redu	cing Female Ada	apter So	oc x Fpt		
	3/4 x 1/2	20 x 12	035759					1/2 x 1/4	12 x 6	035571		-
	1 x 3/4	25 x 20	035760					1/2 x 3/8	12 x 0	035951		-
	1-1/4 x 1	32 x 25	035761					1/2 x 3/4	12 x 20	035572		_
$\bigcirc$							$\smile$					-
		40 x 32	035762						$20 \times 10$			
	-1/2 x 1-1/4	40 x 32 50 x 40	035762					3/4 x 1/2	20 x 12	035992		-
		40 x 32 50 x 40 100 x 75	035762 035764 035765					3/4 x 1/2 3/4 x 1 1 x 3/4	20 x 12 20 x 25 25 x 20	035992 035990 035958		-

	Dimensio	on	Sch 40 White	e	Sch 40 Grey	1		Dimensio	on	Sch 40 White	Sch 40 Gr
	inches	mm	Product Code	9	Product Code	е		inches	mm	Product Code	Product Co
			-				<b>.</b> .			_	
ncen	tric Couplin	-					Eccentr	ic Coupling			
	8 x 3	200 x 75		t		t	9	8 x 4	200 x 100	- 1	
	8 x 4	200 x 100		t		†		8 x 6	200x150	- 1	
	8 x 6	200 x 150		t		t	$\bigcup$	10 x 4	250 x 100	035479 +	
	10 x 4	250 x 100		t		†		10 x 6	250 x 150	- 1	
	10 x 6	250 x 150	035441	t	035045	t		10 x 8	250 x 200	- 1	
	10 x 8	250 x 200	035442	t	035046	t		12 x 4	300 x 100	- 1 035480 1	
	12 x 4	300 x 100	-	t	-	t		12 x 6 12 x 8	300 x 150		
	12 x 6	300 x 150	035443	t	035047	t		12 x 0 12 x 10	300 x 200 300 x 250		
	12 x 8	300 x 200	035444	t	035048	t		12 x 10 14 x 6	350 x 250	- 1	
	12 x 10	300 x 250	-	t	035049	+		14 x 8	350 x 150 350 x 200	- 1	
	14 x 6	350 x 150	-	t	-	t		14 x 10	350 x 200	- 1	
	14 x 8	350 x 200	035445	t	-	+		14 x 10 14 x 12	350 x 250	- 1	
	14 x 10	350 x 250	-	†		+		14 x 12 16 x 8	400 x 200	- 1	
	14 x 12	350 x 300	-	†		+		16 x 10	400 x 200 400 x 250	- 1	
	16 x 8	400 x 200		t		†		16 x 12	400 x 200	- 1	
	16 x 10	400 x 250	-	• †		' †		16 x 12	400 x 350	- 1	
	16 x 12	400 x 300	-	' †		' †		18 x 8	450 x 200	- 1	
	16 x 12	400 x 350	-		-			18 x 10	450 x 250	- 1	
				+		†		18 x 12	450 x 300	- 1	
	18 x 8	450 x 200	-	†	-			18 x 14	450 x 350	- 1	
	18 x 10	450 x 250	-	†				18 x 16	450 x 400	- 1	
	18 x 12	450 x 300	-	t				20 x 12	500 x 300	- 1	
	18 x 14	450 x 350	-	†				20 x 14	500 x 350	- 1	
	18 x 16	450 x 400	-	t	-			20 x 16	500 x 400	- 1	
	20 x 12	500 x 300	-	†	-			20 x 18	500 x 450	- 1	
	20 x 14	500 x 350	-	t	-			24 x 14	600 x 350	- 1	· _
	20 x 16	500 x 400	-	t	-	•		24 x 16	600 x 400	- 1	
	20 x 18	500 x 450	-	t	-			24 x 18	600 x 450	- 1	· -
	24 x 14	600 x 350	-	t	-	•		24 x 20	600 x 500	- 1	· -
	24 x 16	600 x 400	035436	t	-						
	24 x 18	600 x 450	-	t	-	•	Reducin	ig Male Ada	pter Mtx 3	Soc	
	24 x 20	600 x 500	-	t	-			1/2	12	-	035167
								1/2 x 3/4	12 x 20	035614	-
								3/4	20	-	035168
ale Ad	apter Soc							3/4 x 1/2	20 x 12	035615	-
	3/8	9	035934		-			3/4 x 1	20 x 25	035616	-
	1/2	12	035602		-			1	25	-	035169
	3/4	20	035603		-			1 x 3/4	25 x 20	035617	-
	1	25	035604		-			1 x 1-1/4	25 x 32	035618	-
	1-1/4	32	035605		-			1 1/4	32	-	035170
	1-1/2	40	035606		-			1-1/4 x 1	32 x 25	035380	-
	2	50	035607		-		1-	1/4 x 1-1/2	32 x 40	035593	-
	2-1/2	65	035608		-			1-1/2	40	-	035171
	3	75	035609		-			1/2 x 1-1/4	40 x 32	035619	-
	4	100	035610		-			1-1/2 x 2	40 x 50	035620	-
	5	125	035611		-			2	50	-	035172
	6	150	035612		_			2 x 1-1/2	50 x 40	035973	-
	8	200	035613		_			2 x 2-1/2	50 x 65	235041	-
	0	200	030013		-			2-1/2	65	-	035173
S to P	PIP Adapter	Snig x Soc						2-1/2 x 3	65 x 75	235042	-
	6	150	235045					2-1/2 x 4	65 x 100	235043	-
	U	100	200040		-			2	75		03517

XIRTEC PVC AND CORZAN CPVC

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3 x 4

75 x 100

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#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 40 WHITE & SCH. 40 GREY FITTINGS

	Dimensi inches	on mm	Sch 40 White Product Code	Sch 40 Grey Product Code		Dimen inches	sion mm		Sch 40 Grey Product Code
Dies	r Extension E		•		Pod	ugar Buching		(222)	
RISE	<b>r Extension</b> Fp	•	025501		Keul	6 x 2	150 x 500	035683	
	1/2	12	035591	-	$\square$	6 x 2	150 x 50 150 x 75	035684	-
	3/4	20	035944	-		6 x 4	150 x 75 150 x 100	035685	- 035244
	1	25	035947	-	$\bigcup$	6 x 5	150 x 125	035686	-
	_	_				8 x 4	200 x 100	035687	035245
Spig	ot x Female Ad	lapter Spig	g x Fpt			8 x 6	200 x 150	035688	035246
	1/2	12	035578	-		10 x 4	250 x 100	035689 +	
	3/4	20	035579	-		10 x 6	250 x 150	035690 †	
Y	1	25	035580	-		10 x 8	250 x 200	035691 +	
$\bigcirc$	1-1/4	32	035581	-		12 x 4	300 x 100	035041 +	
	1-1/2	40	035582	-		12 x 6	300 x 150	035692 +	
	2	50	035583	-		12 x 8	300 x 200	035693 +	
	2-1/2	65	035584	-		12 x 10	300 x 250	035694 +	
	3	75	035585	-		14 x 6	350 x 150	- †	
	4	100	035586	-		14 x 8	350 x 200	- †	
						14 x 10	350 x 250	- †	035254
Dod	ugar Bughing					14 x 12	350 x 300	035695 t	035255
Reul	ucer Bushing					16 x 8	400 x 200	- t	
$\bigcirc$	1/2 x 1/4	12 x 6	035643	-		16 x 10	400 x 250	- †	035256
$\square$	1/2 x 3/8	20 x 9	035644	-		16 x 12	400 x 300	- †	035207
$\square$	3/4 x 1/2	20 x 12	035646	035209		16 x 14	400 x 350	- †	035257
<u> </u>	1 x 1/2	25 x 12	035648	035211		18 x 10	450 x 250	- †	- 1
	1 x 3/4	25 x 20	035649	035212		18 x 12	450 x 300	- †	- 1
	1-1/4 x 1/2	32 x 12	035650	035213		18 x 14	450 x 350	- †	- 1
	1-1/4 x 3/4	32 x 20	035651	035214		18 x 16	450 x 400	- †	- 1
	1-1/4 x 1	32 x 25	035652	035215		20 x 12	500 x 300	- †	- 1
	1-1/2 x 1/2	40 x 12	035653	035216		20 x 14	500 x 350	- †	- 1
	1-1/2 x 3/4	40 x 20	035654	035217		20 x 16	500 x 400	- †	
	1-1/2 x 1	40 x 25	035655	035218		20 x 18	500 x 450	- +	
	1-1/2 x 1-1/4	40 x 32	035656	035219		24 x 14	600 x 350	- †	
	2 x 1/2	50 x 12	035657	035220		24 x 16	600 x 400	- †	
	2 x 3/4	50 x 20	035658	035221		24 x 18	600 x 450	- †	
	2 x 1	50 x 25	035659	035222		24 x 20	600 x 500	- †	- 1
	2 x 1-1/4	50 x 32	035660	035223	тт	Bushing Mpt	V FPT		
	2 x 1-1/2	50 x 40	035661	035224		3/8 x 1/4	9 x 6	035696	
	2-1/2 x 1/2	65 x 12	035662	-		1/2 x 1/4	12 x 6	035697	-
	2-1/2 x 3/4	65 x 20	035663	-		1/2 x 3/8	12 x 9	035698	_
	2-1/2 x 1	65 x 25	035664	-		3/4 x 1/4	20 x 6	035699	-
	2-1/2 x 1-1/4	65 x 32	035665	035227		3/4 x 3/8	20 x 9	035968	_
	2-1/2 x 1-1/2	65 x 40	035666	035228		3/4 x 1/2	20 x 12	035700	_
	2-1/2 x 2	65 x 50	035667	035229		1 x 1/2	25 x 12	035701	-
	3 x 3/4	75 x 20	035668	033223		1 x 3/4	25 x 20	035702	-
	3 x 1	75 x 25	035669	035231		1-1/4 x 1/2	32 x 12	035703	-
	3 x 1-1/4	75 x 32	035670	035232		1-1/4 x 3/4	32 x 20	035704	-
						1-1/4 x 1	32 x 25	035705	-
	3 x 1-1/2	75 x 40	035671	035233		1-1/2 x 1/2	40 x 12	035706	-
	3 x 2	75 x 50	035672	035234		1-1/2 x 3/4	40 x 20	035707	-
	3 x 2-1/2	75 x 65	035673	035235		1-1/2 x 1	40 x 25	035708	-
	4 x 2	100 x 50	035677	035238		1-1/2 x 1-1/4	40 x 32	035709	-
	4 x 2-1/2	100 x 65	035678	035239		2 x 1	50 x 25	035711	-
	4 x 3	100 x 75	035679	035240		2 x 1-1/4	50 x 32	035712	-
	5 x 2	125 x 50	035680	-		2 x 1-1/2	50 x 40	035713	-
	5 x 3	125 x 75	035681	-		2-1/2 x 2	65 x 50	035714	-
	5 x 4	125 x 100	035682	035241		3 x 2	75 x 50	035715	-
	See page 5 for desc	riptions				3 x 2-1/2	75 x 65	035716	-

CPVC

CORZAN

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ΡVC

XIRTEC

	Dimen	sion	Sch 40 White	Sch 40 Grey
	inches	mm	Product Code	Product Code
			-	
edı	ucer Bushing	Spig x Fpt		
)	1/2 x 1/8	12 x 3	035717	-
	1/2 x 1/4	12 x 6	035718	035258
	1/2 x 3/8	12 x 9	035719	035259
	3/4 x 1/4	20 x 6	035720	-
	3/4 x 1/2	20 x 12	035722	035260
	1 x 3/8	25 x 9	035723	-
	1 x 1/2	25 x 12	035724	035262
	1 x 3/4	25 x 20	035725	035263
	1-1/4 x 1/2	32 x 12	035726	035264
	1-1/4 x 3/4	32 x 20	035727	035265
	1-1/4 x 1	32 x 25	035728	035266
	1-1/2 x 1/2	40 x 12	035729	035267
	1-1/2 x 3/4	40 x 20	035730	035268
	1-1/2 x 1	40 x 25	035731	035269
	1-1/2 x 1-1/4	40 x 32	035732	035270
	2 x 1/2	50 x 12	035733	035271
	2 x 3/4	50 x 20	035734	035272
	2 x 1	50 x 25	035735	035273
	2 x 1-1/4	50 x 32	035736	035274
	2 x 1-1/2	50 x 40	035737	035275
	2-1/2 x 1/2	65 x 12	035738	-
	2-1/2 x 3/4	65 x 20	035739	-
	2-1/2 x 1	65 x 25	035740	-
	2-1/2 x 1-1/4	65 x 32	035741	-
	2-1/2 x 1-1/2	65 x 40	035742	035277
	2-1/2 x 2	65 x 50	035743	035278
	3 x 3/4	75 x 20	035744	-
	3 x 1	75 x 25	035745	-
	3 x 1-1/4	75 x 32	035746	-
	3 x 1-1/2	75 x 40	035747	035282
	3 x 2	75 x 50	035748	035283
	3 x 2-1/2	75 x 65	035749	-
	4 x 2	100 x 50	035750	035285
	4 x 2-1/2	100 x 65	035751	-
	4 x 3	100 x 75	035752	035286
	5 x 3	125 x 75	035753	-
	5 x 4	125 x 100	035754	235062
	6 x 2	150 x 50	035755	-
	6 x 3	150 x 75	035756	_
	6 x 4	150 x 100	035757	035287
	6 x 5	150 x 125	035758	-
		_		
U	Wye Soc x So	c x Soc		

$\bigcirc$		1-1/2	40	035912		-
$  \rangle$	0	2	50	035913		-
	/	3	75	035915		-
$\cup$		4	100	035916		-
		6	150	035917		-
	6	x 6 x 4	150 x 150 x 100	035922	1	-

1/2" - 2" - 235 psi maximum internal pressure rating @ 73°F (12 - 50mm - 1 620 kPa maximum internal pressure rating @ 23°C)
3" - 6" - 150 psi maximum internal pressure rating @ 73°F (75 - 150mm - 1 034 kPa maximum internal pressure rating @ 23°C)

Dimension		Sch 40 White	Sch 40 Grey
inches	mm	Product Code	Product Code

#### 45° Wye Soc x Soc x Soc (50 psi / 345 kPa max)

				-	
2	1/2	12	-	035357	t
h	3/4	20	-	035358	†
$\geq$	1-1/2	40	-	035359	t
J	2	50	-	035360	†
	2-1/2	65	-	035361	t
	3	75	-	-	†
	4	100	-	035363	t
	6	150	-	035364	†
	8	200	-	035365	t
	10	250	-	035366	†
	12	300	-	035367	t
	14	350	-	-	†
	16	400	-	-	t
	18	450	-	-	•
	20	500	-	-	•
	24	600	-	-	•

#### **45° Reducing Wye** Soc x Soc x Soc (50 psi / 345 kPa max)

45°	Reducing v	vye	Soc x S	SOC X	Soc (50	psi / 345 k	(Pa max)	
2	8 x 8 x 4	200	x 200 :	x 100	-	03	35372	†
$\langle \rangle$	8 x 8 x 6	200	x 200 :	x 150	-	03	35373	+
Y	10 x 10 x 4	250	x 250 :	x 100	-		-	t
	10 x 10 x 6	250	x 250 x	x 150	-	03	35374	+
	10 x 10 x 8	250	x 250 x	x 200	-		-	t
	12 x 12 x 4	300	x 300 x	x 100	-		-	t
	12 x 12 x 6	300	x 300 x	x 150	-	03	35935	t
	12 x 12 x 8	300	x 300 x	x 200	-		-	t
	12 x 12 x 10	300	x 300 x	x 250	-		-	t
	14 x 14 x 6	350	x 350 x	x 150	-		-	t
	14 x 14 x 8	350	x 350 x	x 200	-		-	t
	14 x 14 x 10	350	x 350 x	x 250	-		-	t
	14 x 14 x 12	350	x 350 x	x 300	-		-	t
	16 x 16 x 8	400	x 400 x	x 200	-	03	35375	t
	16 x 16 x 10	400	x 400 x	x 250	-		-	t
	16 x 16 x 12	400	x 400 x	x 300	-		-	t
	16 x 16 x 14	400	x 400 x	x 350	-		-	t
	18 x 18 x 8	450	x 450 x	x 200	-		-	₽
	18 x 18 x 10	450	x 450 x	x 250	-		-	
	18 x 18 x 12	450	x 450 x	x 300	-		-	₽
	18 x 18 x 14	450	x 450 x	x 350	-		-	
	18 x 18 x 16	450	x 450 x	x 400	-		-	•
	20 x 20 x 12	500	x 500 x	x 300	-		-	
	20 x 20 x 14	500	x 500 x	x 350	-		-	₽
	20 x 20 x 16	500	x 500 x	x 400	-		-	
	20 x 20 x 18	500	x 500 x	x 450	-		-	₽
	24 x 24 x 14	600	x 600 :	x 350	-		-	
	24 x 24 x 16	600	x 600 x	x 400	-		-	•
	24 x 24 x 18	600	x 600 x	x 450	-		-	
	24 x 24 x 20	600	x 600 x	x 500	-		-	₽

#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 40 WHITE & SCH. 40 GREY FITTINGS

		Dimer	ision	Sch 40 White	Sch 40 Grey		Dimens	sion	Sch 40 White	Sch 40 Grey
		inches	mm	Product Code	Product Code		inches	mm	Product Code	Product Code
	Cap	Soc				Plug	Mpt			
	·	3/8	9	035406	035590		3/8	9	035621	-
ŕ		1/2	12	035407	035017		1/2	12	035622	035188
		3/4	20	035408	035018		3/4	20	035623	035189
		1	25	035409	035019		1	25	035624	035190
		1-1/4	32	035410	035020		1-1/4	32	035625	035191
		1-1/2	40	035411	035021		1-1/2	40	035626	035192
		2	50	035412	035022		2	50	035627	035193
		2-1/2	65	035413	035023		2-1/2	65	035628	035194
		3	75	035414	035024		3	75	035629	035195
		4	100	035415	035024		4	100	035630	035196
		5					6	150	235047	-
			125	035416	035026					
		6	150	035417	035027	Plug	Spig			
		8	200	035418	035028	$\frown$	3/8	9	035946	-
		10	250	035419 ·		†	1/2	12	035631	035197
		12	300	035420		†	3/4	20	035632	035198
		14	350	035421 ·	035031	† 💛	1	25	035633	035199
		16	400		t -	†	1-1/4	32	035634	035200
		18	450	035422 ·	t -	•	1-1/2	40	035635	035201
		20	500	035940 ·	t -		2	50	035636	035202
		24	600	- •	+ -	Þ	2-1/2	65	035637	035203
							3	75	035638	035204
	Cap	Fpt					4	100	035639	-
		3/8	9	035948	_	0			00	
	Ímmi	1/2	12	035423	035032	5800	les Pipe OD x S			'a Open-Ended
		3/4	20	035424	035033		2-1/2 x 3/4	65 x 20	235048	-
		1	25	035425	035034		3 x 1-1/4	75 x 32	035996	-
14		1-1/4	32	035426	035035		3 x 1-1/2	75 x 40	235049	-
		1-1/2	40	035427	035036	These	3 x 2 4 x 1-1/4	75 x 50 100 x 32	035995 035767	-
		2	50	035428	035037	sizes are	4 x 1-1/4 4 x 1-1/2	100 x 32 100 x 40	035768	-
		2-1/2	65	035429	035038	bushed.	4 x 1-1/2 4 x 2	100 x 40 100 x 50	035769	-
υ		3	75	035430	035039		5 x 1-1/2	125 x 40	235050	-
>					035039		5 x 2	125 x 40 125 x 50	035955	-
D U		4	100	035431	-		6 x 1-1/4	150 x 32	235051	-
		5	125	035432	-		6 x 1-1/2	150 x 40	035588	-
A N		6	150	035433	-		6 x 2	150 x 50	035942	-
Ν							6 x 4	150 x 100	035770	-
С	Unic	on Soc x Soc	Buna O-ring	g Seal		•	8 x 1-1/4	200 x 32	235052	-
0		1/2	12	035900	-		8 x 1-1/2	200 x 40	235053	-
0 0	della	3/4	20	035901	-	•	8 x 2	200 x 50	235054	-
U							8 x 4	200 x 100	035976	-
N D C		1	25	035902	-		0 X 4	200 x 100	033370	
ANDC			25 32	035902 035903	-		8 x 4 10 x 4	250 x 100	035771	-
C A N D C		1		035903	-					-
ANDC		1 1-1/4	32			Sadd		250 x 100	035771	- a Open-Ended
V C A N D C		1 1-1/4 1-1/2	32 40	035903 035904	-	Sadd	10 x 4	250 x 100	035771	- a Open-Ended
ECPVCANDC	Unic	1 1-1/4 1-1/2 2	32 40 50	035903 035904 035905	-	Sadd	10 x 4	250 x 100 Fpt (Rated for	035771 80 psi / 552 kP	- a Open-Ended - -
RTEC PVC AND C	Unic	1 1-1/4 1-1/2 2 0 <b>n</b> Fpt x Fpt	32 40 50 Buna O-ring	035903 035904 035905 Seal	-	Sadd	10 x 4	250 x 100 Fpt (Rated for 65 x 20	035771 80 psi / 552 kP 235055	- a Open-Ended - - -
ECPVCANDC	Unic	1 1-1/4 1-1/2 2 0n Fpt x Fpt 1/2	32 40 50 Buna O-ring 12	035903 035904 035905 Seal 035906	• • •	Sadd	10 x 4 les Pipe OD x F 2-1/2 x 3/4 3 x 1-1/2	250 x 100 Fpt (Rated for 65 x 20 75 x 40	035771 80 psi / 552 kP 235055 035993	- a Open-Ended - - - -
RTEC PVC AND C		1 1-1/4 1-1/2 2 0n Fpt x Fpt 1/2 3/4	32 40 50 Buna O-ring 12 20	035903 035904 035905 Seal 035906 035907	- - - -	Sadd	10 x 4 les Pipe OD x F 2-1/2 x 3/4 3 x 1-1/2 4 x 1-1/2 5 x 2 6 x 1-1/2	250 x 100 Fpt (Rated for 65 x 20 75 x 40 100 x 40	035771 80 psi / 552 kP 235055 035993 035772	- a Open-Ended - - - - - -
RTEC PVC AND C	Unic	1 1-1/4 1-1/2 2 0n Fpt x Fpt 1/2 3/4 1	32 40 50 Buna O-ring 12 20 25	035903 ( 035904 ( 035905 ( ) Seal ( 035906 ( 035907 ( 035908 ()	- - - - -	Sadd	10 x 4 les Pipe OD x F 2-1/2 x 3/4 3 x 1-1/2 4 x 1-1/2 5 x 2	250 x 100 Fpt (Rated for 65 x 20 75 x 40 100 x 40 125 x 50 150 x 40 150 x 100	035771 80 psi / 552 kP 235055 035993 035772 035943 035587 235056	- a Open-Ended - - - - - - -
RTEC PVC AND C	Unic CO	1 1-1/4 1-1/2 2 0n Fpt x Fpt 1/2 3/4 1 1-1/4	32 40 50 Buna O-ring 12 20 25 32	035903 035904 035905 Seal 035906 035908 035908	- - - - - - - - -	Sadd	10 x 4 les Pipe OD x F 2-1/2 x 3/4 3 x 1-1/2 4 x 1-1/2 5 x 2 6 x 1-1/2	250 x 100 Fpt (Rated for 65 x 20 75 x 40 100 x 40 125 x 50 150 x 40 150 x 100 200 x 40	035771 80 psi / 552 kP 235055 035993 035772 035943 035587 235056 235057	- a Open-Ended, - - - - - - - - - - - - -
RTEC PVC AND C		1 1-1/4 1-1/2 2 0n Fpt x Fpt 1/2 3/4 1	32 40 50 Buna O-ring 12 20 25	035903 ( 035904 ( 035905 ( ) Seal ( 035906 ( 035907 ( 035908 ()	- - - - - - - - -	Sadd	10 x 4 les Pipe OD x F 2-1/2 x 3/4 3 x 1-1/2 4 x 1-1/2 5 x 2 6 x 1-1/2 6 x 4	250 x 100 Fpt (Rated for 65 x 20 75 x 40 100 x 40 125 x 50 150 x 40 150 x 100	035771 80 psi / 552 kP 235055 035993 035772 035943 035587 235056	- - - - - -

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#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 80 & CORZAN CPVC SCH. 80 FITTINGS

	Dimens	sion	PVC Sch 80	CPVC Sch 80			ension	PVC Sch 80	CPVC Sch 80
	inches	mm	Product Code	Product Code		inches	mm	Product Code	Product Code
Тее	Soc x Soc x S				Rer	lucing Tee	Soc x Soc x Soc	-	
100	1/4	6	036768	059479			20 x 20 x 12	036786	059492
	3/8	9	036769	059480		1 x 3/4 x 3/4	25 x 20 x 20	036790	-
) b	1/2	12	036770	059481	$\left( \right) \right) $	1 x 3/4 x 1	25 x 20 x 25	036791	059493
$\sim$	3/4	20	036771	059482		1 x 1 x 1/2	25 x 25 x 12	036788	059494
	1	25	036772	059483		1 x 1 x 3/4	25 x 25 x 20	036789	-
	1-1/4	32	036772	059484		1-1/4 x 1 x 3/4		036792	-
	1-1/4	40	036774	059485		1-1/4 x 1 x 1-1/4	32 x 32 x 25	-	059495
	2	40 50	036775	059485		1-1/4 x 1-1/4 x 3/4	1 32 x 32 x 20	036793	-
	2-1/2	65	036776	059480		1-1/4 x 1-1/4 x 1	32 x 32 x 25	036794	-
	3	75	036777	059487		1-1/2 x 1-1/2 x 3/4	40 x 40 x 20	036795	059496
		100	036778	059488		1-1/2 x 1-1/2 x 1	40 x 40 x 25	036796	059497
	4					2 x 2 x 1/2	50 x 50 x 12	036797	059498
	6	150	036780	059490		2 x 2 x 3/4	50 x 50 x 20	036798	059499
	8	200	036781	059491		2 x 2 x 1	50 x 50 x 25	036799	059500
	10	250		■ 059062 ■		2 x 2 x 1-1/2	50 x 50 x 40	036800	059501
	12	300		059084		3 x 3 x 2	75 x 75 x 50	036802	059502
	10	250	036782			3 x 3 x 2-1/2	75 x 75 x 65	036803	059504
	12	300		+ -		4 x 4 x 2	100 x 100 x 50	036804	059505
	14	350	036784			4 x 4 x 3	150 x 100 x 75	036805	-
	16	400		+ -		6 x 6 x 3	150 x 150 x 75	036807	-
	18	450	036126	† -		6 x 6 x 4	150 x 150 x 100		+ 059506
_						8 x 8 x 4	200 x 200 x 100	036809	-
Тее	Soc x Soc x F				_	8 x 8 x 6	200 x 200 x 150		t 059567
$\frown$	1/2	12	036828	059942		10 x 10 x 4	250 x 250 x 100		+ -
	3/4	20	036829	059943		10 x 10 x 6	250 x 250 x 150		+ -
) PT	1	25	036830	059518		10 x 10 x 8	250 x 250 x 200		t -
$\bigcirc$	2	50	036832	-		12 x 12 x 8	300 x 300 x 200		t -
						12 x 12 x 10	300 x 300 x 250		t -
Тее	Fpt x Fpt x Fj	pt			_	14 x 14 x 10 14 x 14 x 12	350 x 350 x 250 350 x 350 x 300		t -
$\sim$	1/4	6	036817	059507		14 x 14 x 12 16 x 16 x 12	400 x 400 x 300		t - t -
( )	3/8	9	036818	059508		16 x 16 x 12	400 x 400 x 350	-	T -
	1/2	12	036819	059509		10 × 10 × 14	400 x 400 x 330	-	-
$\overline{\mathbf{C}}$	3/4	20	036820	059510			_		
	1	25	036821	059511	90		x Soc		
	1-1/4	32	036822	059512		1/4	6	036179	059192
	1-1/2	40	036823	059513	$(\mathcal{Y})$	3/8	9	036180	059193
	2	50	036824	059514	M	1/2	12	036181	059194
	2-1/2	65	036825	059515	$\bigcirc$	3/4	20	036182	059195
	3	75	036826	059516		1	25	036183	059196
	4	100	036827	059517		1-1/4	32	036184	059197
						1-1/2 2	40 50	036185	059198 059199
90°	Elbow Fpt x	Fpt				2-1/2	50 65	036186 036187	059199
	1/4	6	036197	059206	_	3	75	036187	059200
$\bigcirc$ )	3/8	9	036198	059207		4	100	036188	059201
S	1/2	12	036199	059208		6	150	036191	059202
$\bigcirc$	3/4	20	036200	059209		8	200	036192	059203
	1	25	036201	059210		10	250		059085
	1-1/4	32	036202	059211		12	300		059086
	1-1/2	40	036203	059212		10	250	036193 ·	
	2	50	036204	059213		12	300	036194 ·	
				059214			350	036195 ·	
	2-1/2	60	036203	059214		14	330	000100	-
	2-1/2 3	65 75	036205 036206	059214		14 16	400	036196 ·	

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#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 80 & CORZAN CPVC SCH. 80 FITTINGS

	sion	PVC Sch 80	CPVC Sch 80		Dim	ension	PVC Sch 80	CPVC Sch 80
inches	mm	Product Code	Product Code		inches	mm	Product Code	Product Code
Ibow Soc x	Fpt			22-	1/2º Elbow	Soc x Soc		
1/2	12	036172	059187		2	50	036134	059614
3/4	20	036173	059941		3	75	036135	059615
1	25	036174	059188	$\square$	4	100	036136	059616
1-1/4	32	036175	059189	$\bigcirc$	6	150	036137 +	-
1-1/2	40	036176	059190		8	200	036138 +	-
2	50	036177	059191		10	250	036139 +	-
					12	300	036140 +	-
	<b>bow</b> Soc x 1/2 3/4 1 1-1/4 1-1/2	bow         Soc x Fpt           1/2         12           3/4         20           1         25           1-1/4         32           1-1/2         40	bow         Soc x Fpt           1/2         12         036172           3/4         20         036173           1         25         036174           1-1/4         32         036175           1-1/2         40         036176	bowSoc x Fpt1/2120361720591873/4200361730599411250361740591881-1/4320361750591891-1/240036176059190	bow         Soc x Fpt         22-           1/2         12         036172         059187           3/4         20         036173         059941           1         25         036174         059188           1-1/4         32         036175         059189           1-1/2         40         036176         059190	bow         Soc x Fpt         22-1/2° Elbow           1/2         12         036172         059187           3/4         20         036173         059941           1         25         036174         059188           1-1/4         32         036175         059189           1-1/2         40         036176         059190           2         50         036177         059191	bow         Soc x Fpt         22-1/2° Elbow         Soc x Soc           1/2         12         036172         059187           3/4         20         036173         059941           1         25         036174         059188           1-1/4         32         036175         059190           1-1/2         40         036176         059191           2         50         036177         059191	bow       Soc x Fpt       22-1/2° Elbow       Soc x Soc         1/2       12       036172       059187         3/4       20       036173       059941         1       25       036174       059188         1-1/4       32       036175       059189         1-1/2       40       036176       059190         2       50       036177       059191

чJ	LINOW SOC	X 30C				
	1/4	6	036142		059162	
27	3/8	9	036143		059163	
$\rightarrow$	1/2	12	036144		059164	
	3/4	20	036145		059165	
	1	25	036146		059166	
	1-1/4	32	036147		059167	
	1-1/2	40	036148		059168	
	2	50	036149		059169	
	2-1/2	65	036150		059170	
	3	75	036151		059171	(
	4	100	036152		059172	
	6	150	036154		059173	
	8	200	036155		059174	
	10	250	036862		059087	
	12	300	036863		059088	
	10	250	036156	+	-	
	12	300	036157	+	-	
	14	350	036158	+	-	
	16	400	036159	†	-	

45° Elbow Soc x Soc

11-	1/4º Elbow	Soc x Soc		
$\bigcirc$	2	50	-	059617
$\square$	3	75	-	059618
$\bigcirc$	4	100	-	059619

#### **Cross** Soc x Soc x Soc x Soc

$\bigcirc$	1/4	6	-		059620
	1/2	12	036116		059154
VY.	3/4	20	036117		059155
$\smile$	1	25	036118		059156
	1-1/4	32	036119		059157
	1-1/2	40	036120		059158
	2	50	036121		059159
	2-1/2	65	036122		059018
	3	75	036123		059160
	4	100	036124		059161
	6	150	036125	†	-

45°	Elbow Fpt >	Fpt			Cou	pling Soc x	Soc				
$\sim$	1/4	6	036160	059176		1/4	6	036088		059130	
$\mathbb{N}$	3/8	9	036161	059177		3/8	9	036089		059131	
M	1/2	12	036162	059178		1/2	12	036090		059132	
$\bigcirc$	3/4	20	036163	059179	$\bigcirc$	3/4	20	036091		059133	
	1	25	036164	059180		1	25	036092		059134	
	1-1/4	32	036165	059181		1-1/4	32	036093		059135	
	1-1/2	40	036166	059182		1-1/2	40	036094		059136	
	2	50	036167	059183		2	50	036095		059137	
	2-1/2	65	036168	059184		2-1/2	65	036096		059138	
	3	75	036169	059185		3	75	036097		059139	
	4	100	036170	059186		4	100	036098		059140	
						6	150	036099		059141	
						8	200	036100		059142	
300	Elbow Soc	x Soc				10	250	036101	t	059033	+
50	6	150	236003	059022	_	12	300	036102	t	059043	†
$\square$	U	100	230003	039022		14	350	036103	†	-	
$\bowtie$						16	400	036889	t	-	

	Dimen	ision	PVC Sch 80	CPVC Sch 80	
	inches	mm	Product Code	Product Code	
Cou	I <b>pling</b> Fpt x F	pt			
<b>_</b>	1/4	6	036104	059143	-
	3/8	9	036105	059144	
$\bowtie$	1/2	12	036106	059145	Ć
$\bigcirc$	3/4	20	036107	059146	
	1	25	036108	059147	
	1-1/4	32	036109	059148	
	1-1/2	40	036110	059149	
	2	50	036111	059150	
	2-1/2	65	036112	059151	
	3	75	036113	059152	
	4	100	036114	059153	

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	Dimen	ision	PVC Sch 80	CPVC Sch 80
	inches	mm	Product Code	Product Code
45°	Wye SocxS	oc x Soc		
$\sim$	1-1/2	40	036854	059553
'λ	2	50	036855	059536
$\checkmark$	3	75	036856	059537
·	4	100	036857	059538

			-		-
6	150	036858		059539	
6 x 4	150 x 100	036861		059541	
8	200	036859	t	-	
8 x 6	200 x 150	036884	†	-	

**1/2" - 2" - 235 psi maximum internal pressure rating @ 73°F** (12 - 50mm - 1 620 kPa maximum internal pressure rating @ 23°C)

3" - 6" - 150 psi maximum internal pressure rating @ 73°F

(75 - 150mm - 1 034 kPa maximum internal pressure rating @ 23°C)

Red	lucer Coupling	Soc x Soc		
$\frown$	3/4 x 1/2	20 x 12	036719	059460
$\bigcirc$	1 x 1/2	25 x 12	036720	059461
$\mathbf{M}$	1 x 3/4	25 x 20	036721	059462
$\bigcirc$	1-1/4 x 3/4	32 x 20	036723	-
	1-1/4 x 1	32 x 25	036724	059463
	1-1/2 x 1/2	40 x 12	036725	-
	1-1/2 x 3/4	40 x 20	036726	059464
	1-1/2 x 1	40 x 25	036727	059465
	1-1/2 x 1-1/4	40 x 32	036728	059466
	2 x 1/2	50 x 12	036897	-
	2 x 1	50 x 25	036729	059467
	2 x 1-1/2	50 x 40	036731	059458
	3 x 2	75 x 50	036735	059470
	4 x 2	100 x 50	036736	059459
	4 x 3	100 x 75	036738	059472
	6 x 4	150 x 100	036740	059471
	8 x 6	200 x 150	036743	059473

Red	ucer Coupling	Fpt x Fpt		
	1/2 x 1/4	12 x 6	036746	-
	3/4 x 1/2	20 x 12	036748	-
M	1 x 1/2	25 x 12	036749	-
$\bigcirc$	1 x 3/4	25 x 20	036750	-
	1-1/4 x 3/4	32 x 20	036751	-
	1-1/2 x 1	40 x 25	036754	-
	2 x 1-1/2	50 x 40	036758	-

Devi				
Red	ucer Bushing	Spig x Soc	(flushstyle)	
	3/8 x 1/4	9 x 6	036599	-
	1/2 x 1/4	12 x 6	036600	059373
	1/2 x 3/8	12 x 9	036601	059374
$\bigcirc$	3/4 x 1/2	20 x 12	036604	059375
	1 x 1/2	25 x 12	036605	059376
	1 x 3/4	25 x 20	036606	059377
	1-1/4 x 1/2	32 x 12	036607	059378
	1-1/4 x 3/4	32 x 20	036608	059379
	1-1/4 x 1	32 x 25	036609	059380
	1- 1/2 x 1/2	40 x 12	036610	059381
	1- 1/2 x 3/4	40 x 20	036611	059382
	1-1/2 x 1	40 x 25	036612	059383
	1-1/2 x 1-1/4	40 x 32	036613	059384
	2 x 1/2	50 x 12	036614	059385
	2 x 3/4	50 x 20	036615	059386
	2 x 1	50 x 25	036616	059387
	2 x 1-1/4	50 x 32	036617	059388
	2 x 1-1/2	50 x 40	036618	059389
	2 -1/2 x 1-1/4	65 x 32	036620	-
	2-1/2 x 1-1/2	65 x 40	036621	-
	2-1/2 x 2	65 x 50	036622	059392
	3 x 1	75 x 25	036623	-
	3 x 1-1/2	75 x 40	036624	059393
	3 x 2	75 x 50	036625	059394
	3 x 2-1/2	75 x 65	036626	059395
	4 x 2	100 x 50	036628	059396
	4 x 3	100 x 75	036630	059397
	6 x 2	150 x 50	036632	059398
	6 x 3	150 x 75	036633	059399
	6 x 4	150 x 100	036634	059400
	8 x 6	200 x 150	036638	059401
	10 x 6	250 x 150	036922 1	· -
	10 x 8	250 x 200	036270 +	· -
	12 x 10	300 x 250	036208 1	
	12 x 6	300 x 150	036908	-
	12 x 8	300 x 200	036645	-

#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 80 & CORZAN CPVC SCH. 80 FITTINGS

	Dimens	sion	PVC Sch 80	CPVC Sch 80		Dime	nsion	PVC Sch 80	CPVC Sch 80
	inches	mm	Product Code	Product Code		inches	mm		Product Code
	- · · ·								
Red	ucer Bushing		(flushstyle)		TT	Bushing Mp			
	3/8 x 1/4	9 x 6	036679	-		3/8 x 1/4	9 x 6	036647	059402
	1/2 x 1/4	12 x 6	036681	059428		1/2 x 1/4	12 x 6	036648	059403
	1/2 x 3/8	12 x 9	036682	059429		1/2 x 3/8	12 x 9	036649	059404
$\bigcirc$	3/4 x 1/4	20 x 6	036683	059430		3/4 x 1/4	20 x 6	036651	059405
	3/4 x 1/2	20 x 12	036684	059431		3/4 x 3/8	20 x 9	036652	059406
	1 x 3/8	25 x 9	036685	-		3/4 x 1/2	20 x 12	036653	059407
	1 x 1/2	25 x 12	036686	059432		1 x 1/4	25 x 6	036654	059643
	1 x 3/4	25 x 20	036687	059433		1 x 3/8	25 x 9	036655	-
	1-1/4 x 1/2	32 x 12	036688	059434		1 x 1/2	25 x 12	036656	059408
	1-1/4 x 3/4	32 x 20	036689	059435		1 x 3/4	25 x 20	036657	059409
	1-1/4 x 1	32 x 25	036690	059436		1-1/4 x 1/2	32 x 12	036658	059410
	1-1/2 x 1/2	40 x 12	036691	059437		1-1/4 x 3/4	32 x 20	036659	059411
	1-1/2 x 3/4	40 x 20	036692	059438		1-1/4 x 1	32 x 25	036660	059412
	1-1/2 x 1	40 x 25	036693	059439		1-1/2 x 1/2	40 x 12	036661	059413
	1-1/2 x 1-1/4	40 x 32	036694	059440		1-1/2 x 3/4	40 x 20	036662	059414
	2 x 1/2	50 x 12	036695	059441		1-1/2 x 1	40 x 25	036663	059415
	2 x 3/4	50 x 20	036696	059442		1-1/2 x 1-1/4	40 x 32	036664	059416
	2 x 1	50 x 25	036697	059443		2 x 1/2	50 x 12	036665	059417
	2 x 1-1/4	50 x 32	036698	059444		2 x 3/4	50 x 20	036666	059418
	2 x 1-1/2	50 x 40	036699	059445		2 x 1	50 x 25	036667	059419
	2-1/2 x 3/4	65 x 20	036700	059446		2 x 1-1/4	50 x 32	036668	059420
	2-1/2 x 1	65 x 25	036701	059447		2 x 1-1/2	50 x 40	036669	059421
	2-1/2 x 1-1/4	65 x 32	036702	059448		2-1/2 x 2	65 x 50	036672	059422
	2-1/2 x 1-1/2	65 x 40	036703	059449		3 x 1-1/2	75 x 40	036673	059423
	2-1/2 x 2	65 x 50	036704	059450		3 x 2	75 x 50	036674	059424
	3 x 3/4	75 x 20	036705	-		3 x 2-1/2	75 x 65	036675	059425
	3 x 1	75 x 25	036706	059547		4 x 2	100 x 50	036676	059426
	3 x 1-1/4	75 x 32	036707	-		4 x 3	100 x 75	036677	059427
	3 x 1-1/2	75 x 40	036708	059451					
	3 x 2	75 x 50	036709	059452					
	3 x 2-1/2	75 x 65	036710	059453	For	ale Adapter	See y Ent		
	4 x 2	100 x 50	036711	059454	ren	-		026200	050217
	4 x 2-1/2	100 x 65	036712	059640	$\bigcirc$	1/4	6	036209	059217
	4 x 3	100 x 75	036713	059455		3/8	9	036210	059218
	6 x 2	150 x 50	036714	-	$\Box$	1/2	12	036211 036212	059219
	6 x 3	150 x 75	036715	059641		3/4	20		059220
	6 x 4	150 x 100	036716	059456		1	25	036213	059221
						1-1/4	32	036214	059222
						1-1/2	40	036215	059223
Mal	<b>e Adapter</b> So	o v Mot				2	50	036216	059224
IVI d I			026400	050280		2-1/2	65 75	036217	059225
	1/2	12	036420	059286		3	75	036218	059226
	3/4	20 25	036421	059287		4	100	036219	059227
$\bigcup$	1	25	036422	059288		6	150	036221 +	-
	1-1/4	32	036423	059289					
	1-1/2	40	036424	059290					
	2	50	036425	059291					
	2-1/2	65	036426	059292					
	3	75	036427	059293					
	4	100	036428	059294					
	6	150	036887 +	-					

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	Dime inches	nsion mm	PVC Sch 80 Product Code	CPVC Sch 80 Product Code		Dim inches	ension mm	PVC Sch 80 Product Code	CPVC Sch 80 Product Code
Femal	e Adapter	Soc x Fpt	(SS reinforced)		Cap	Fpt			
	1/2	12	036971	059951		1/4	6	036072	059119
$\square$	3/4	20	036972	059952	$\left( \begin{array}{c} \\ \end{array} \right)$	3/8	9	036073	059120
	1	25	036973	059953		1/2	12	036074	059121
$\bigcirc$	1-1/4	32	036974	059954	$\smile$	3/4	20	036075	059122
	1-1/2	40	036975	059955		1	25	036076	059123
	2	50	036976	059956		1-1/4	32	036077	059124
	2-1/2	65	036977	059646		1-1/2	40	036078	059125
	3	75	036978	059957		2	50	036079	059126
	4	100	036979	059958		2-1/2	65	036080	059127
						3	75	036081	059128
Femal	e Adapter	Spig x Fpt	(SS reinforced	)		4	100	036082	059129
$\bigcirc$	1/2	12	036965	059945	-				
<b>M</b>	3/4	20	036966	059946					
	1	25	036967	059947					
$\smile$	1-1/4	32	036968	059948	Plug	Mpt			
	1-1/2	40	036969	059949		1/4	6	036568	059361
	2	50	036970	059950		3/8	9	036569	059362
	3	75	236000	059647		1/2	12	036570	059363
	4	100	236001	059648		3/4	20	036571	059364
						1	25	036572	059365
Hose A	Adapter ⊦	lose x Mpt				1-1/4	32	036573	059366
$\bigcirc$	1/4	6	036394 +	-		1-1/2	40	036574	059367
	3/8	9	036395 +	-		2	50	036575	059368
	1/2	12	036396 +	-		2-1/2	65	036576	059369
Π	3/4	20	036397 +	-		3	75	036577	059370
θ	1	25	036398 +	-		4	100	036578	059371
	1 1/4	32	036399 +	-		6	150	036579	-
	1 1/2	40	036400 +	-					
	2	50	036401 +	-					
	2 1/2	65	036402 +	-					
	3	75	036403 +	-	Plug	Spig			
	4	100	036404 +	-	$\bigcirc$	2	50	036585	-
Cap :	Soc								
$\bigcirc$	1/4	6	036056	059107					
	3/8	9	.036057	059108					
	1/2	12	036058	059109	90°	Radius Ben	ds - 6D Spig	x Spig	
	3/4	20	036059	059110		1/2	12	- +	-
	1	25	036060	059111		3/4	20	036027 +	-
	1-1/4	32	036061	059112		1	25	036028 +	
	1-1/2	40	036062	059113	0	1-1/4	32	036029 +	
	2	50	036063	059114		1-1/2	40	036030 +	-
	2-1/2	65	036064	059115		2	50	036031 +	
	3	75	036065	059116		2-1/2	65	036032 +	-
	4	100	036066	059117		3	75	036033 +	
	6	150	036067	059118		4	100	036034 +	
	8	200	036068	059029		6	150	036035 +	
	10	250	036069 +			8	200	036036 +	
	12	300	036070 +			10	250	036868 +	
	14	350	- +			12	300	- +	
	16	400	036071 +	-					

∎,+,▶ See page 5 for descriptions

#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 80 & CORZAN CPVC SCH. 80 FITTINGS

Dimension         PVC Sch 80         DVPC Sch 80           inches         mm         PVC Sch 80         DVPC Sch 80           45° Radius Bends - 60         Spig x Spig         Inches         mm         PVC Sch 80         DVPC Sch 80           1/2         12         1         2         30         1         2         30
1/2       1/2       1/2       036020       +         1       2/5       036021       +       1       1/2       036411       -         1.1/2       40       036022       +       1       1/2       036413       -         2       50       036024       +       -
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $
3/4       20       036020       +       3/4       20       036411       -         1       25       036021       +       1       25       036413       -         2       50       036023       +       -       1       1/4       32       036413       -         2       50       036024       +       -
1       25       036021       +         1.1/4       32       -       +         2       50       036022       +         2       50       036023       +         2       50       036024       +         4       100       036025       +         6       130       036026       +         10       2260       -       +         11       25       036040       +         12       300       +       -         12       300       +       -         11/2       12       036012       +       -         11/2       12       036013       +       -         11/2       12       036015       +       -         11/2       12       036016       +       -         11/2       300       +       -       -         11/2       10       036015       +       -         11/2       12       036016       +       -         12       300       +       -       -         12       300       +       -       -
1-1/4       32       -       +         1-1/4       32       036022       +         2       50       036023       +         2-1/2       65       036024       +         4       100       036025       +         6       150       036026       +         8       200       -       +         10       250       -       +         12       300       -       +         12       300       -       +         12       036012       +       -         14       20       -       +       -         12       036013       +       -       -         14       20       036014       -       -         10       250       -       +       -         2       50       036014       -       -         10       250       -       +       -         11       25       036035       -       -         12       300       -       +       -         11/2       40       036043       059106         12/2       50
1-1/2       40       036022       +         2       50       036023       +         3       75       036024       +         4       100       036025       +         6       150       036025       +         8       200       -       +         10       280       -       +         12       300       -       +         12       300       -       +         12       200       -       +         12       12       036012       +       -         12       12       036012       +       -         12       12       036013       -       -         1.1/2       40       036042       059105         1.1/2       40       036043       059106         1.1/2       40       036045       059106         1.1/2       40       036047       -         2       50       036018       +       -         12       300       -       +       -         12       300       -       +       -         12       036633
2         50         036023         +         -           2-1/2         65         036867         +         -
2-1/2         65         036867         +           3         75         036024         +           4         100         036026         +           6         150         036026         +           8         200         -         +           10         250         -         +           12         300         -         +           12         300         -         +           12         300         -         +           12         036013         +         -           14         25         036013         +         -           11/2         40         -         +         -           2         50         036014         +         -           2         50         036015         +         -           2         50         036014         +         -           2         50         036015         +         -           3         75         036016         +         -           10         250         -         +         -           12         300         -         +
3         75         0.36024         +           4         100         0.36025         +           6         150         0.36026         +           10         250         -         +           12         300         -         +           12         300         -         +           12         300         -         +           12         0.36012         +         -           3/4         20         -         +           12         0.36012         +         -           3/4         20         -         +         -           1/2         12         0.36013         +         -           2         50         0.36014         +         -           2/1/2         4         100         0.36015         +         -           2         50         0.36014         +         -         -           2         50         0.36014         +         -         -           10         250         -         +         -         -           12         300         -         +         -
4         100         0.36025         +           6         150         0.36025         +           8         200         +         +           10         250         +         +           12         300         -         +           12         300         -         +           12         300         -         +           12         200         +         -           12         300         -         +         -           12         20         60         36041         -           14         25         036013         +         -           1.1/2         40         -         -           2         50         036015         -         -           2         50         036016         +         -           10         250         -         -         -           3         75         036016         +         -           10         250         -         -         -           10         250         -         -         -           112         300         - <t< td=""></t<>
6         150         036026         +           8         200         +         12         300         +         12         12         036038         059100           12         300         -         +         12         12         036039         059101           12         300         -         +         -         3/4         20         036039         059101           12         12         036012         †         - </td
8       200       -       +         10       250       +       1/2       1/2       1/2       1/2       036038       059100         22-1/2° Radius Bends - 6D       Spig x Spig       - <t< td=""></t<>
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
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22-1/2° Radius Bends - 6D Spig x Spig       1-1/4       32       036041       .         1/2       12       036012       †       .       .       1-1/2       40       036042       059103         1       25       036013       †       .       .       .       2       50       036043       059104         1-1/4       32       .       †       .
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
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1-1/2       40       -       +       -         2       50       036014       +       -         2.1/2       65       036015       +       -         3       75       036016       +       -         4       100       036017       +       -         6       150       036018       +       -         8       200       036019       +       -         10       250       -       +       -         12       300       -       +       -         12       300       -       +       -         1/2       12       036833       059519         3/8       9       036834       -         1/2       12       036835       059522         1/1/2       12       036836       059522         1/1/2       12       036836       059522         1/1/2       40       036836       059524         2       50       036840       059526         1-1/2       40       036225       059230         1-1/2       40       036225       059230         1-1/2
2         50         036014         t         -           2-1/2         65         036015         t         -           3         75         036016         t         -           4         100         036017         t         -           6         150         036018         t         -           8         200         036019         t         -           10         250         -         t         -           12         300         -         t         -           12         300         -         t         -           1/4         6         036833         059519         -         1           3/8         9         036834         -         -         -           1/2         12         036835         059520         -         t         -           3/4         20         036836         059523         -         t         -         -           1/2         12         036842         059526         3/4         20         036226         059230           1-1/2         40         036843         059550         1         1/2
2-1/2         65         036015         t         -           3         75         036016         +         -           4         100         036017         t         -           6         150         036018         t         -           10         250         -         t         -           12         300         -         t         -           12         300         -         t         -           1/4         6         036833         059519         -           3/4         20         036834         -         -           1/2         12         036835         059520         -           3/4         20         036836         059521         -           1/2         12         036837         059522         -           1/1/2         40         036837         059522         -           3/4         20         036842         059526         3/4         20         036225         059230           1/1/2         40         036842         059526         -         1-1/4         32         036226         059232           1/1/2
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8       200       036019       t       -         10       250       -       t       -         12       300       -       t       -         12       300       -       t       -         112       300       -       t       -         12       300       -       t       -         112       300       -       t       -         112       300       -       t       -         114       6       036833       059519       -       3       75       036052       -         3/8       9       036834       -<
10       250       -       t       -         12       300       -       t       -         12       300       -       t       -         112       036833       059519       -       -         112       12       036835       059520       -       -       t         3/4       20       036836       059521       -       -       t       -         11/2       12       036837       059522       -       -       t       -         11/2       40       036839       059526       -       -       1       25       036226       059228         11/2       40       036843       059526       -       1       1/2       40       036227       059232         12       50       036843       059526       -       1       1/2
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
Union Soc x Soc (Viton® 0-ring Seal)       3       75       036052       -         1/4       6       036833       059519       4       100       036055       -         3/8       9       036834       -       -       t       -       t       -         1/2       12       036835       059520       -       t       -       -       t       -       t       -       t       -       t       -       t       -       t       -       t       -       t       -       t       -       t       -       t       -       t       -       t       -       t       -       0       036052       -       t       1       1       2       036223       059228       1       1       1       2       036226
Union       Soc x Soc       (Viton® 0-ring Seal)       4       100       036055       -         3/8       9       036834       -       6       150       -       t       -         1/2       12       036835       059520       6       150       -       t       -         3/4       20       036836       059521       1       25       036837       059522       1/2       12       036223       059228         1-1/4       32       036838       059523       3/4       20       036225       059230         1-1/2       40       036840       059525       3/4       20       036226       059232         3       75       036842       059526       1-1/4       32       036226       059232         4       100       036843       059550       1-1/2       40       036227       059232         1/4       6       036844       059527       3       75       036230       059235         1/2       1/2       036845       -       6       150       036233       059238         1/2       12       036845       -       6       150       036233
1/4       6       036833       059519       0
3/8       9       036834       -         1/2       12       036835       059520         3/4       20       036836       059521         1       25       036837       059522         1-1/4       32       036838       059523         1-1/2       40       036840       059524         2       50       036842       059526         3       75       036842       059526         4       100       036843       059550         2       50       036843       059526         4       100       036843       059527         3/8       9       036845       -         1/2       12       036233       059528         3/8       9       036846       059529         3/8       9       036846       059529         3/8       9       036845       -         1/2       12       036233       059528
1/2       12       036835       059520         3/4       20       036836       059521         1       25       036837       059522         1-1/4       32       036838       059523         1-1/2       40       036839       059524         2       50       036840       059525         3       75       036842       059526         4       100       036843       059550         1/4       6       036844       059527         3/8       9       036845       -         1/2       12       036231       059238         4       100       036845       -         1/4       6       036845       -         1/2       12       036232       -         4       100       036845       -         1/2       12       036845       -         1/2       12       036846       059529
3/4       20       036836       059521         1       25       036837       059522         1-1/4       32       036838       059523         1-1/2       40       036839       059524         2       50       036840       059525         3       75       036842       059526         4       100       036843       059550         2       50       036844       059550         3       75       036842       059550         4       100       036843       059550         2       50       036844       059527         3/8       9       036845       -         1/2       12       036234       059529         3/8       9       036845       -         1/2       12       036846       059529
Image: Instructure       Image: In
1-1/4       32       036838       059523         1-1/2       40       036839       059524         2       50       036840       059525         3       75       036842       059526         4       100       036843       059550         2       50       036844       059526         4       100       036843       059550         2       50       036844       059550         2       50       036844       059526         4       100       036843       059550         2       50       036228       059233         2-1/2       65       036229       059235         3       75       036844       059527         3/8       9       036845       -         1/2       12       036846       059529         1/2       12       036846       059529
1-1/2       40       036839       059524         2       50       036840       059525         3       75       036842       059526         4       100       036843       059550         2       50       036844       059550         1-1/2       40       036227       059232         2       50       036843       059550         2       50       036228       059233         2-1/2       65       036229       059234         3       75       036844       059527       3       75       036230       059235         3/8       9       036845       -       6       150       036233       059238         1/2       12       036846       059529       6       150       036233       059238
2       50       036840       059525         3       75       036842       059526         4       100       036843       059550         2       50       036226       059231         1-1/2       40       036227       059232         2       50       036228       059233         2       50       036228       059233         2-1/2       65       036229       059234         3       75       036844       059527         3/8       9       036845       -         1/2       12       036846       059529
3       75       036842       059526       1-1/2       40       036227       059232         4       100       036843       059550       2       50       036228       059233         2-1/2       65       036229       059234         3       75       036844       059527         3/8       9       036845       -         1/2       12       036846       059529
4         100         036843         059550         2         50         036228         059233           Union         Fpt x Fpt         (Viton® O-ring Seal)         2-1/2         65         036229         059234           1/4         6         036844         059527         3         75         036230         059235           3/8         9         036845         -         6         1100         036232         -           1/2         1/2         036846         059529         6         150         036233         059238
Union         Fpt x Fpt         (Viton® O-ring Seal)         2-1/2         65         036229         059234           1/4         6         036844         059527         3         75         036230         059236           3/8         9         036845         -         5         125         036232         -           1/2         12         036846         059529         6         150         036233         059238
Union         Fpt x Fpt         (Viton® O-ring Seal)         3         75         036230         059235           1/4         6         036844         059527         4         100         036231         059236           3/8         9         036845         -         5         125         036232         -           1/2         12         036846         059529         6         150         036233         059238
1/4         6         036844         059527         4         100         036231         059236           3/8         9         036845         -         5         125         036232         -           1/2         12         036846         059529         6         150         036233         059238
1/4         6         0.36844         0.59527         4         100         0.36231         0.59236           3/8         9         0.36845         -         5         125         0.36232         -           1/2         1/2         0.36846         0.59529         6         150         0.36233         0.59238
3/8         9         036845         -         5         125         036232         -           1/2         1/2         036846         059529         6         150         036233         059238
1/2 12 036846 059529 6 150 036233 059238
3/4 20 036847 059530 8 200 036234 059239
1 25 036848 059531 10 250 036235 + -
$\begin{array}{cccccccccccccccccccccccccccccccccccc$
1-1/4 52 050649 059552
1-1/2         40         036850         059533         14         550         050237         1         1           2         50         036851         059534         16         400         036238         t         -
19 150 026970 +
3       75       036852       059535       18       450       036870       t       -         4       100       036853       059651       20       500       -       t       -

∎,+, See page 5 for descriptions

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CPVC

CORZAN

A N D

ΡVC

XIRTEC

		iension	PVC Sch 80			Dimen	sion	PVC Sch 80	CPVC Sch 80
	inches	mm	Product Code	e Product	Code	inches	mm	Product Code	Product Code
Flange	Fpt (s	olid style)			Hea	avy Duty Vanst	one Flange	Soc w Fibre	-Loc Ring
_	1/2	12	036240	0592	40	1/2	12	-	059262
	3/4	20	036241	0592	41	3/4	20	-	059263
	1	25	036242	0592	42	1	25	-	059264
	1-1/4	32	036243	0592		1-1/4	32	-	059265
	1-1/2	40	036244	0592	44	1-1/2	40	036323	059266
	2	50	036245	0592	45	2	50	036324	059267
	2-1/2	65	036246	0592	46	2-1/2	65	-	059268
	3	75	036247	0592	.47	3	75	036326	059269
	4	100	036248	0592		4	100	036416	059270
	6	150	036249	0592	.49	6	150	036417	059271
						8	200	036418	059272
Flange	Blind					10	250	036419 +	
Trange	1/2	12	036250	059	250	12	300	036429 †	
	3/4	20	036250	059		14	350		▼ -
I	1	25	036252	059		16	400		▼ -
	1-1/4	32	036253	059					•
	1-1/2	40	036254	059		▼ Molded hub, c/	w coated metal	rings	
	2	50	036255	059					
	2-1/2	65	036256	059					
	3	75	036257	059					
	4	100	036258	059		stone Flange	Soc w PVC	Ring	
	6	150	036259	059		1/2	12	036344	
	8	200	036260	059	260	3/4	20	036345	_
	10	250	036261	† ·		1	25	036346	_
	12	300	036262	t ·		1-1/4	32	036340	-
	14	350	036263	†		1-1/4	40	036347	-
	16	400	036264	†		2	40 50	036348	-
	18	450	036265	†					-
	20	500	-	†		2-1/2	65 75	036350	-
	24	600	036266	†		3	75	036351	-
Δ Γ	omed flang	Je				4	100	036352	-
▼ L	onicu nang					5	125	036353	-
						6	150	036354	-
No-Lea	ak Flange					8	200	036355	-
	1/2	12		t -		10	250	036356 🔻	
	3/4	20	036332	t <sup>-</sup>		12	300	036357 🔻	-
1.1	1	25	02002						

▼ Molded hub, c/w coated metal rings

|--|

$\frown$	18	450	036947	†	-
$(\mathbf{O})$	20	500	036913	+	-
	24	600	036914	+	-

Note: these flanges are rated at 50 psi (345 kPa) maximum operating  $% \left( 1-\frac{1}{2}\right) =0$ 

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1-1/4

1-1/2

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2-1/2

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036923

036333

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036335

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036338

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036340

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#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 80 & CORZAN CPVC SCH. 80 FITTINGS

	Dimensi inches	on mm	PVC Sch 80 Product Code	CPVC Sch 80 Product Code		Dimer inches	nsion mm	PVC Sch 80 Product Code	CPVC Sch 80 Product Code
V	anstone Flange	Snig			Nipı	nles			
	1/2	12	036374	059274		1/4" (6mm) diam	otor		
( <sup>O</sup>	3/4	20	036375	059275					
$\underline{\bigcirc}$	1	25	036376	059276		7/8 close	22	036434	059296
	1-1/4	32	036377	059277	Quintin	1-1/2	40	036445	059306
	1-1/2	40	036378	059278		2	50	036456	059316
	2	50	036379	059279		2-1/2	65	036457	-
	2-1/2	65	036380	059280	Ŷ	3	75	036458	059317
	3	75	036381	059281		3 1/2	90	036459	-
	4	100	036382	059282		4	100	036460	059318
	6	150	036383	059283		4-1/2	115	036461	-
	8	200	036384	059570		5	125	036462	059319
	10	250	036321 +	-		6	150	036463	059320
	12	300	036406 +	-		8	200	036464	-
						10	250	236012	-
						12	300	236013	-
					;	3/8" (9mm) diam	eter		
V	anstone Flange F	<sup>-</sup> pt			_	1 close	25	036435	059551
	1/2	12	036385	059656		1-1/2	40	036446	059307
	3/4	20	036386	059657		2	50	036466	059552
	1	25	036387	059658		2-1/2	65	036467	-
	1-1/4	32	036388	059284		3	75	036468	059939
	1-1/2	40	036389	059659		3-1/2	90	036469	-
	2	50	036390	059660		4	100	036470	059554
	2-1/2	65	036391	059661		4-1/2	115	036471	-
	3	75	036392	059285		5	125	036472	-
22	4	100	036393	059662		6	150	036473	-
						8	200	036474	-
						1/2" (12mm) dia	meter		
U 1	/9" Elango Cocko	• Noonrono				1-1/8 close	28	036436	059297
	/8" Flange Gaske				-	1-1/2	40	036447	059308
U market	1/2 3/4	12	036296	-		2	50	036475	059322
z Q	$) \frac{3/4}{1}$	20	036297	-		2-1/2	65	036476	-
Z Z		25	036298	-		3	75	036477	059321
с	1-1/4 1-1/2	32 40	036299 036300	-		3-1/2	90	036478	-
P V C A N D C O	2	40 50	036300			4	100	036479	059324
	2-1/2	65	036302	-		4-1/2	115	036480	-
	3	75	036302	-		5	125	036481	059325
	4	100	036304	_		5-1/2	140	036482	-
	5	125	036305	-		6	150	036483	059326
	6	150	036306	_		8	200	036484	-
U	8	200	036307	-		10	250	036485	-
ш Н	10	250	036308	-		12	300	036486	-
£	12	300	036309	-					
×	14	350	036310	-					
	16	400	036311	-					
	18	450	036312	-					
	20	500	036313	-					
	0.4	600	000014						

∎,+,▶ See page 5 for descriptions

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	Dimens	sion	PVC Sch 80	CPVC Sch 80		Dimen	sion	PVC Sch 80	CPVC Sch 8
	inches	mm	Product Code	Product Code		inches	mm	Product Code	Product Cod
Nipp	oles				Nip	ples			
;	3/4" (20mm) diar	neter				1-1/2" (40mm) di	ameter		
<b>M</b>	1-3/8 close	35	036437	059298		1-3/4 close	45	036440	059301
	1-1/2	40	036448	059309		2	50	036451	059312
	2	50	036490	059327		2-1/2	65	036526	-
	2-1/2	65	036491	-		3	75	036527	059342
Ann	3	75	036492	059328		3-1/2	90	036528	-
	3-1/2	90	036492	-	×	4	100 115	036529 036530	059343
	4	100	036493	059329		4-1/2 5	115	036531	059344
						5-1/2	125	036532	059544
	4-1/2	115	036495	-		6	140	036533	059345
	5	125	036496	059331		8	200	036534	-
	5-1/2	140	036497	-		10	250	036535	-
	6	150	036498	059332		12	300	036536	-
	8	200	036500	-					
	10	250	036501	-		2" (50mm) diame	ter		
	12	300	036502	-		2 close	50	036441	059302
						2-1/2	65	036452	-
	1" (25mm) diame	eter				3	75	036539	059346
	1-1/2 close	40	036438	059299		3-1/2	90	036540	-
						4	100	036541	059347
	2	50	036449	059310		4-1/2	115	036542	-
	2-1/2	65	036504	-		5	125	036543	059348
	3	75	036505	059333		5-1/2	140	036544	-
	3-1/2	90	036506	-		6	150	036545	059349
	4	100	036507	059334		8	200	036546	-
	4-1/2	115	036508	-		10	250	036547	-
	5	125	036509	059335		12	300	036548	-
	5-1/2	140	036510	-					
	6	150	036511	059336		2-1/2" (65mm) di	ameter		
	8	200	036512	-		2-1/2 close	65	036442	059303
	10	250	036514	-		3	75	036549	-
	12	300	036515	-		4	100	036550	059351
						6	150	036551	059352
	1-1/4" (32mm) di	iomotor				8	200	036552	-
						12	300	036553	-
	1-5/8 close	41	036439	059300					
	2	50	036450	059311		3" (75mm) diame	ter		
	2-1/2	65	036516	-		2-5/8 close	67	036443	059304
	3	75	036517	059338		3	75	036554	059353
	3-1/2	90	036518	-		4	100	036555	059354
	4	100	036519	059339		5	125	036556	059355
	4-1/2	115	036520	-		6	150	036557	059356
	5	125	036521	059340		8	200	036558	-
	6	150	036522	059341		10	250	036559	-
	8	200	036523	-		12	300	036560	-
	10	250	036524	-		411 (100- ) 1			
	12	300	036525	-		4" (100mm) diam			
	16	000	000020			2-7/8 close	72	036444	059305
						4	100	036562	-
						5	125	036563	-
						6	150	036564	059357
						8	200	036565	-

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036567

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#### PRODUCT SELECTION CHART - XIRTEC 140 PVC SCH. 80 & CORZAN CPVC SCH. 80 FITTINGS

	Dime	nsion	PVC Sch 80	CPVC Sch 80		Dime	nsion	PVC Sch 80	CPVC Sch 80
	inches	mm	Product Code	Product Code		inches	mm	Product Code	Product Code
Exp	ansion Joint	6" (150mm)	Travel EPDM		Poly	propylene P	ipe Clamps		
	1/2	12	136115	059973	Al	1/2	12	035180	-
ĥ	3/4	20	136117	059975		3/4	20	035181	-
	1	25	136119	059977		1	25	035182	-
A	1-1/2	40	136121	059979		1-1/4	32	035183	-
Ŧ	2	50	136123	059981		1-1/2	40	035184	-
L	3	75	136125	059983		2	50	035185	-
	4	100	136127	059985					

Exp	Dansion Joint	12" (1300mm)	Iravel EPDM	
~	1/2	12	136116	059959
Ä	3/4	20	136118	059961
Ц	1	25	136120	059963
	1-1/2	40	136122	059965
T	2	50	136124	059967
	3	75	136126	059969
	4	100	136128	059971

Expension loint 101 (1000 .....) Travel EDDM

Expansion Joint 6" (150mm) Travel Viton®

12

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100

136101

136103

136105

136107

136109

136111

136113

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1-1/2

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#### Strut Base

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059974

059976

059978

059980

059982

059984

059986

- - 035186 Note: Strut Bases are sold individually, two Strut Bases are required to create one Strut Base Unit. Example: If you require 10 complete Strut Base Units you must

Example: If you require 10 complete Strut Base Units you must order 20 strut bases.

#### Pipe Straps 2 holes

	1/2	12	036000	
))	3/4	20	036001	
6	1	25	036002	
9	1-1/4	32	036003	
	1-1/2	40	036004	
	2	50	036005	

#### Pipe Straps PVC Coated Steel 2 holes

6	_	2-1/2	65	036006	
٩	$\left( \right) $	3	75	036007	
_	U	3-1/2	90	036008	
	9	4	100	036009	
		5	125	036010	
		6	150	036011	

"U" Bend	4" (100mm) O.C. f	or Ice Rink Piping	

1	25	059019 Barbed end
1	25	- Plain End (Spigot)
Fits 1" (25mm)	ID Poly Pipe	

24	

Expansion Joint	12" (1300mm)	Travel Viton®

~	1/2	12	136102	059960
Ä	3/4	20	136104	059962
	1	25	136106	059964
	1-1/2	40	136108	059966
T	2	50	136110	059968
	3	75	136112	059970
	4	100	136114	059972

# IPEX Industrial CADonDemand Center

#### **REGISTER TO GAIN ACCESS TO:**

- Complete dimensions of Schedule 40 and Schedule 80, Xirtec PVC and Corzan CPVC fittings
- 2D & 3D CAD drawing formats available
- 2D & 3D Valve CAD drawings available soon
- BIM coming soon

Register at www.ipexna.com

## HIGH PRESSURE CLEAR-GUARD CLEAR PVC PIPE 1/2" -

### Clear-Gu@rd™

IPEX Clear-Guard<sup>™</sup> Clear PVC pipe provides a cost-effective multipurpose solution for many different piping applications. The benefits of rigid Xirtec®140 PVC piping are well documented including light weight, flexibility, durability and exceptional corrosion resistance. These benefits with the addition of clarity, are now available in our Clear-Guard Clear PVC pipe product. Our clarity provides 360° visibility for several applications including dual-containment, clean room and site glass applications.

With IPEX's new high pressure clear PVC pipe you can specify Schedule 40 clear pipe for applications where previously only Schedule 80 clear pipe would suffice. Our high pressure formulation, with a long-term hydrostatic design basis of 3,150 psi allows for better clarity and more versatility for various applications.

#### ADVANTAGES

1) Sizes range from 1/2" to 8" Schedule 40 pipe

- Standard 10 foot lengths
- 20 foot lengths available by special order
- Certified to NSF-61
- 3,150 psi HDB tested in accordance with ASTM D2837
  - **Pressure and Vacuum service**

#### **APPLICATIONS**

- Clear-Guard Dual-Containment Systems
- Dual-Containment for High Purity Tubing
- Leak Detection Systems
- Agricultural & Aquacultural Applications
- Chemical Processing/Blending
- Healthcare/Hospital Use
- Laboratory Applications
- Environmental Applications
- Sight Gauge Assemblies
- Displays/Exhibits
- Food & Beverage Processing
- and more ...

#### STANDARDS



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Clear-Guard<sup>™</sup> Clear PVC pipe is designed for indoor applications where there is no significant exposure to ultraviolet sources or to direct sunlight.

#### **COMPATIBILITY & PRESSURE RATING**

IPEX Clear-Guard Clear PVC pipe is produced from a rigid, virgin Polyvinyl Chloride (PVC) compound with a Cell Classification of 15334 per ASTM D1784. This material also enables Clear-Guard Clear PVC piping to carry a maximum service temperature of 140°F when appropriate temperature/pressure de-rating factors are applied.

As with our Xirtec140 PVC piping system our pressure ratings are dependent on the pipe diameter and the operating temperature of the system. As temperatures increase,the pressure rating of the system decreases. Refer to the table for de-rating factors on our Clear-Guard pressure ratings.

This material is compatible with Xirtec140 PVC pipe, fittings and valves, and can be joined into existing PVC systems using the appropriate solvent cement joining process.

#### JOINING TECHNIQUES

IPEX Clear-Guard Clear PVC pipe is easily joined by the solvent cementing process, providing a quick, strong, leak-tight seal for pressure applications.

To maintain the system's clarity, IPEX recommends the use of a clear, mediumbodied, fast-setting cement in conjunction with a clear primer for optimum joint integrity. As an added advantage due to the product's transparency, joint integrity is readily identified during the solvent cement joining process.

Details on proper solvent cementing techniques are available and must be reviewed for proper assembly and joint integrity.

Operating Temperature (°F)	Operating Pressure De-rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22





Clear-Guard<sup>™</sup> has a higher Pressure Rating when compared to the competition

IPEX Clear-Guard PVC 3150 = HDB* @ 73°F				
Size	Product Code	Sch 40 Pressure Rating		
1/2"	22003	480		
3/4"	22009	390		
1"	22014	360		
1-1/4"	22026	290		
1-1/2"	22031	260		
2"	22036	220		
3"	22045	210		
4"	22053	180		
6"	22057	140		
8"	22198	120		

\* HDB = Hydrostatic Design Basis – the established stress value for a compound at a specific temperatuere

CLEAR-GUARD

CLEAR

P V C

PIPE

# ENPURE HIGH PURITY

#### 1/2" - 4" (12mm - 100mm)

### enpure

Enpure<sup>®</sup> proves itself as the superior high purity system manufacturing industries and research facilities are increasingly requiring high purity water systems that will meet the stringent requirements of their operations. Whether the application is for ultra pure water or for transporting chemically pure agents of foodstuffs, water purification technologies such as distillation, de-ionization, reverse osmosis and filtration eliminate a variety of impurities such as bacteria, particulates and both organic and inorganic contaminants.

The purity of a system depends on the leach ability of the material and joining method used to assemble the system.

Traditional materials used for handling high purity water have been metal and glass piping. The issue is that metals can exhibit problems with trace metal contamination; and elements such as sodium, boron, silica, lead and arsenic can be leached out of glass piping.

Over the past twenty years, advances in thermoplastic technology have enabled the effective use of plastics for high-purity water distribution systems, even in aggressive ultra high purity applications.

#### APPLICATIONS

- Food processing
- Hospitals
- Laboratories
- Universities
- Research facilities
   Biotechnology
- Chemical manufacturing
- Photographic chemical processing
- Effluent treatment plants
- Water treatment plants
- Pharmaceutical manufacturing

#### STANDARDS

NSF

FDA Code of Federal Regulations CFR Title 21-177.1520 2002

#### DID YOU KNOW?

Enpure is manufactured from special high purity natural polypropylene materials. No regrind material or pigment is used in the production of pipe or fittings. Using virgin un-pigmented material ensures purity. To avoid contamination during manufacturing, the pipe is capped and boxed immediately after production. Enpure is a low-cost solution with a high resistance to chemicals, corrosion, and abrasion. It also has improved flow characteristics compared to traditional purity systems.

## ADVANTAGES

#### 1) Virgin Material

Enpure is manufactured from special high purity virgin polypropylene materials. No regrind material is used in the manufacturing process, thereby avoiding contamination by colorants or other materials and potential loss of physical properties due to the incorporation of heat stressed materials.

### Abrasion Resistance

The inherent abrasion resistance of natural PP allows substantial increases in life expectancy compared to other materials. In many applications, natural polypropylene outperforms other materials such as metals.

## Improved Flow

IPEX piping is smooth and has a substantially lower roughness factor than metal and other materials, and since thermoplastics do not rust, pit, scale or corrode, the interior walls remain smooth in virtually any service.

### **Biological Resistance**

Enpure natural PP piping is resistant to fungi and bacterial growth. The smoothness of the interior walls inhibits bacterial growth by eliminating sites where bacteria can adhere.

## 5) Chemical Resistance

Enpure natural PP offers a complete high purity system including pipe, fittings and valves with outstanding resistance to most organic and inorganic chemicals in common use. It is potentially vulnerable to strong oxidizing acids, certain organic solvents and chlorinated hydrocarbons.

## Corrosion Resistance

Our thermoplastic materials are immune to damage from naturally corrosive soil conditions as well as electrochemical or galvanic corrosion. These noncorroding properties extend service life and lower maintenance costs even in below-grade applications

### Extended Life

Once properly selected for the application and correctly installed, Enpure products provide years of maintenance free service.

### Lower Costs

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IPEX Enpure natural PP has lower material and installation costs than other comparable materials such as stainless steel or PVDF.

#### **9**) Service Temperature

IPEX Enpure line of pipe, fittings and valves are designed to meet the highest purity standards. It is because of this that there are no additives in the virgin polypropylene material. Additives such as antioxidants and UV stabilizers help thermoplastic materials with oxidation resistance. Since Enpure does not contain these additives, it is pressure rated at 73°F (23°C) and will experience lower pressure capabilities and a shortened service life if operated at elevated temperatures.

### Standards and Approvals

IPEX manufactures the widest range of thermoplastic piping systems available. All products are produced to the strictest internal quality control specifications and meet or exceed applicable regulatory standards.

## VALVE SELECTION

As is the case with other thermoplastic components in a processing system, a valve must be selected based on the characteristics of the fluid medium, the system's operating parameters, and its intended function for a particular application. Certain valve types are more suitable than others for on/off service, throttling or modulating, automation, back flow prevention, etc. The following table summarizes the valves offered as part of the Enpure system.

Some other considerations that may be important when selecting a valve include: physical space requirements or constraints, connection style, manual or remote operation, as well as position indication or feedback.

## AUTOMATED VALVES

IPEX can provide quarter turn pneumatic or electric actuators and mounting assemblies for Enpure ball valves. Pneumatic actuator bonnets are also available for Enpure diaphragm valves. A wide selection of accessories such as pilot solenoid valves, position indicators, and microswitches, allow various control and feedback options. Please refer to the Thermoplastic Valves and Quarter Turn Automation literature or contact IPEX for further details regarding availability.

#### ENPURE NATURAL PP VALVES

Valve Type	Sizes	Materials	Connections/ Style	Pressure Rating (psi) at 73°F
VKD Series Ball Valves	1/2 - 2	Natural PP	Socket, Flange	150
VM Series Diaphragm Valves	1/2 - 2	Natural PP	Socket, Flange	150
SR Series Ball Check Valves	1/2 - 2	Natural PP	Socket, Flange	150

## SHORT FORM SPECIFICATIONS

### SCOPE

All high-purity water piping as shown on drawings shall be socket-fused, virgin natural polypropylene (containing no regrind material) as manufactured by IPEX. The complete system of piping, valves, fittings, faucets, pipe supports and fusion equipment shall be supplied and warranted by a single manufacturer.

#### DIMENSIONS

Physical dimensions of Enpure PP pipe and fittings shall meet or exceed Schedule 40 and Schedule 80 requirements.

#### PIPING

Piping shall be manufactured in 10' or 20' (3 m or 6.1 m) lengths to Schedule 40 and Schedule 80 dimensions from virgin, unpigmented, Type 2 highimpact copolymer polypropylene conforming to ASTM D 4101, using no antioxidants or plasticizers. Piping shall be capped at each end and boxed for protection and cleanliness at the point of manufacturing.

#### FITTINGS

Fittings shall be manufactured from virgin, unpigmented, Type 2 high-impact copolymer

polypropylene conforming to ASTM D 4101, using no antioxidants or plasticizers. Fittings shall be designed for socket fusion utilizing IPEX



socket fusion tools and shall have a

working design pressure of 150 psi at 73°F (1,000 kPa @ 23°C). All fittings shall be packaged in polybags at the point of manufacturing to preserve fitting cleanliness.

#### FAUCETS

All metal faucets shall be polyster powered lacquer coated and have non-pigmented polypropylene wetted parts. Faucets shall be recirculating- style to ensure the elimination of static water pockets and shall be rated at 150 psi @ 73°F (1,000 kPa @ 23°C). All faucets shall be fully compatible with all other natural polypropylene piping components in terms of dimensions, quality and purity.

#### VALVES

All valves shall be manufactured from virgin, unpigmented type 1 Homopolymer polypropylene conforming to ASTM D 4101, using no antioxidants or plasticizers that could compromise water quality. Valves shall be designed for socket fusion utilizing IPEX socket fusion tools and shall have a working design pressure of 150 psi @ 73°F (1,000 kPa @ 23°C).

- All ball valves shall be double-blocking type with o-ring cushions under the PTFE seats, in-line micro adjustment capability and incorporate a spanner wrench in the handle.
- All diaphragm valves shall be weir-style featuring smooth (non-drilled) GRF bonnets with integrated fasteners (for cleanliness) and rising position indicator.
- All valves with EPDM diaphragms shall feature concentric ridges on valve body and smooth diaphragms.
- All valves with PTFE diaphragm shall feature machined (smooth) bodies and rigid PTFE diaphragms for positive seal and longer cycle life.
- All ball check valves shall be single union design with micro adjustable locking seat carrier.

#### SUPPORTS

All piping supports shall incorporate IPEX Cobra clips manufactured from U.V. stabilized polypropylene and designed to allow free axial pipe movement during expansion and contraction of a pipe system. Support spacings shall be to the manufacturer's recommendations for the design temperature of the system.

#### INSTALLATION

Installation shall be in accordance with the contract drawings, the manufacturer's recommendations and the local building codes. The entire system shall be installed stress-free and in proper alignment, with due allowance for expansion and contraction.

#### TESTING

The water-testing requirements on any complete piping system vary dramatically depending on the operating

pressure, temperature, installation conditions, jointing method and the proposed service medium. If the testing is not determined by the engineer or governed by regulatory code, the manufacturer should be contacted.

Air or compressed gas shall never be used for pressure testing rigid thermoplastic piping systems.

#### JOINING METHODS

Joining methods should also be considered when reviewing sources of potential contamination. Not all joining methods are equal. Some joining methods can introduce contaminants into the system that are not introduced by the pipe material itself.

Below is a breakdown of the most common joining methods and their potential affects on purity. To ensure a contamination-free system, Enpure utilizes a socket fusion joining method.

Purity Level	Joining Methods	Description
•	Threaded Metal Joints	Threaded metal components may cause leaching of contained metals, local stagnation of fluid flow and may produce potential sites for bacterial growth when used with high purity water.
• •	Soldered Metal Joints	Oxidation at welded, braised or soldered metal joints can cause contamination when exposed to the high purity water.
• • •	Solvent Welded Joints	Solvent welded plastic joints, unless carefully made and cured, can contribute contamination to high purity water.
• • • •	Socket Fusion	Socket fusion is a simple process of melting and fusing components together resulting in a clean homogeneous joint. As no compounds are used in the process, sources of material contamination are eliminated. For these types of applications, socket fusion is the joining method of choice.

## **PRODUCT SELECTION CHART**

	Dimension inches	Product Code		Dimension inches	Product Code
Schedule 40 Pip	<b>9</b> 10' Lengths		Schedule 80 Pipe	10' Lengths	
	1/2	546000		1/2	546008
$\bigcirc$	3/4	546001		3/4	546009
	1	546002		1	546010
	1-1/4	546003		1-1/4	546011
	1-1/2	546004		1-1/2	546012
	2	546005		2	546013
	3	546006		3	546014
	4	546007		4	546015

1/2	546020
3/4	546021
1	546022
1-1/4	546023
1-1/2	546024
2	546025
3	546026
4	546027

Note: 20' Enpure pipe lengths are non-stock items available upon special request.

### Schedule 80 Pipe 20' Lengths

1/2	546028
3/4	546029
1	546030
1-1/4	546031
1-1/2	546032
2	546033
3	546034
4	546035

Note: 20' Enpure pipe lengths are non-stock items available upon special request.

	Dimension inches	Product Code
Coupling Soc		
	1/2	537122
	3/4	537123
	1	537124
	1-1/4	537125
	1-1/2	537126
	2	537127
	3	537128
	4	537129

	Dimension inches	Product Code
Cap Soc		
	1/2	537182
$(\bigcirc)$	3/4	537183
	1	537184
	1-1/4	537185
	1-1/2	537186
	2	537187
	3	537188

### 90° Elbow Soc

_	1/2	537142
	3/4	537143
	1	537144
	1-1/4	537145
	1-1/2	537146
	2	537147
	3	537148
	4	537149

### Stub Flange Soc

	1/2	537192
	3/4	537193
	1	537194
	1-1/4	537195
	1-1/2	537196
	2	537197
	3	537198
	4	537099

Note: One stub flange and one steel backing flange are required for complete flange system.

## Steel Backing Flange - ASA 150 Drilling

	1/2	537222
	3/4	537223
	1	537224
	1-1/4	537225
	1-1/2	537226
	2	537227
	3	537228
	4	537229

Note: One stub flange and one steel backing flange are required for complete flange system.

### Blind Flange - ASA 150 Drilling

1/2	537212
3/4	537213
1	537214
1-1/4	537215
1-1/2	537216
2	537217
3	537218
4	537219

## 45° Elbow Soc

		1/2	537152
		3/4	537153
		1	537154
		1-1/4	537155
32	1-1/2	537156	
		2	537157
		3	537158
		4	537159

	1/2	537162
$\bigcirc$	3/4	537163
	1	537164
	1-1/4	537165
	1-1/2	537166
	2	537167
	3	537168
	4	537169

#### Union w/ Viton® Seals Soc

	1/2	537172
	3/4	537173
	1	537174
	1-1/4	537175
	1-1/2	537176
	2	537177

IPEX components are dimensionally matched; do not install Enpure system components with components of other brands.

	Dimension inches	Product Code
Reducer Bushin	<b>g</b> Soc	
	3/4 x 1/2	537241
	1 x 1/2	537242
	1 x 3/4	537243
	1-1/4 x 1	537244
	1-1/2 x 1	537245
	1-1/2 x 1-1/4	537246
	2 x 1	537247
	2 x 1-1/4	537248
	2 x 1-1/2	537249
	3 X 1-1/2	537250
	3 x 2	537251
	4 x 2	537252
	4 x 3	537253

Dimension	Product
inches	Code

### Female Adapter Soc x FPT

1/2 x 1/2	537362
1/2 x 1/4	537370
1/2 x 3/8	537371
3/4 x 3/4	537363
1 x 1	537364
1-1/4 x 1-1/4	537365

## VKD True Union Ball Valve w/ Viton® Seals Soc

1/2	537031
3/4	537032
1	537033
1-1/4	537034
1-1/2	537035
2	537036

## End Connectors for True Union Ball Valves Soc

	1/2	537014
n	3/4	537015
	1	537016
	1-1/4	537017
	1-1/2	537018
	2	537019

## UPP Diaphragm Valve - PTFE Diaphragm Soc

 1/2	
3/4	
1	
1-1/4	
 1-1/2	
2	

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537457 537458 33

## 90° Bend Soc

1/2	537272
3/4	537273
1	537304
1-1/4	537305
1-1/2	537306
2	537307
3	537308
4	537309

### Nipple - 6" Long Sp x MPT

	1/2	537322
	3/4	537323
	1	537324
	1-1/4	537325
	1-1/2	537326
	2	537327
	3	537328
	4	537329

### Cobra Pipe Clip - PP

	1/2	437341
	3/4	437342
H A	1	437343
	1-1/4	437344
	1-1/2	437345
-	2	437346
	3	437348
	4	437349

Note: \* 1/2" and 3/4" pipe clips are supplied without retaining bands.

IPEX components are dimensionally matched; do not install Enpure system components with components of other brands.

	Dimension inches	Product Code		Dimension inches	Product Code
UPP Diaphragm \	/alve - EPDM Diaph	ragm Soc	Heater Bushing Se	t- PTFE Coated (1	x Soc, 1 x Sp)
_ A _	1/2	537469		1/2	537382
	3/4	537470		3/4	537383
	1	537471		1	537384
	1-1/4	537472		1-1/4	537385
	1-1/2	537473		1-1/2	537386
	2	537474		2	537387
				3	537388
				4	537389

## Single Union Ball Check Valve w/ Viton® Seats & Seals Soc

1/2	537784
3/4	537785
1	537786
1-1/4	537787
1-1/2	537788
2	537189
	3/4 1 1-1/4

## **Recirculating Faucet Sp** 1/2



## Socket Fusion Joining Kit c/w Full Set of Heater Bushings

1/2 to 2	537401
1/2 to 4	537404

537406
537407

537480

#### 1/2 to 2 537403 537400 1/2 to 4

Socket Fusion Joining Tool - Paddle Only

#### Bench Fusion Joining Kit c/w Full Set of Heater Bushings 1/2 to 4 537410

# Why swim with all the other fish?

## IPEX Industrial – Tough Products for Tough Environments

## THE IPEX SYSTEM ADVANTAGE

The IPEX advantage is obvious. Every plastic pipe, valve and fitting you need for any project; available from a single, reliable source.

Only IPEX offers a complete system of pipe, valves and fittings engineered and manufactured to IPEX's strict quality, performance and dimensional standards. Available in PVC, CPVC, ABS, and natural Polypropylene – for Process Piping, Double Containment, High-Purity, Acid Waste, and Compressed Air applications, as well as a full range of specialty products and systems.

## LEADER IN THERMOPLASTIC PIPING SYSTEMS

IPEX designs and manufactures one of the world's most diverse lines of integrated thermoplastic piping systems. All engineered from the ground up to handle the full range of today's industrial, mechanical, municipal, and electrical applications.

An industry pioneer with more than 50 years of experience in plastic piping systems combined with progressive manufacturing technologies, efficient distribution centers and coast-to-coast customer support. When you choose IPEX, you can be confident that all your piping materials are backed by one company.

## DURAPLUS **ABS INDUSTRIAL**

## 3/8" - 12" (10mm - 300mm

## Duraplus

The Duraplus<sup>®</sup> Industrial Piping System by IPEX offers a complete range of ABS pressure pipe, valves and fittings that are ideal for demanding applications ranging from abrasive slurries and separation reagents to caustic processes and low temperature glycol systems. These rugged Duraplus components operate over a wide range of temperatures while delivering excellent material properties including:

- Exceptional Toughness
- Non-Toxicity
- Corrosion Resistance

This design and installation manual provides the most up-to-date comprehensive information about IPEX's Duraplus ABS Industrial Piping System. By combining IPEX's laboratory test results with over 50 years of field experience, we have produced a manual suited to engineers, contractors and distributors alike. All aspects of Duraplus are described here - from basic raw material properties through to installation procedures of the finished product.

IPEX offers matched Duraplus pipes, fittings and valves in IPS sizes ranging from 3/8" to 12" nominal diameter, suitable for pressures up to 230 psi at 73°F (23°C) (depending on the size).

## **DURAPLUS® FEATURES:**

- High impact strength Outstanding ductility
- Operating range from -40°F to +176°F
- Long term UV resistance
- Wide chemical resistance • Multiple proven and easy joining methods
- Competitive installed cost

## **ADVANTAGES**

## Lightweight

Duraplus Industrial ABS material is 1/8 the weight of steel and 1/5 the weight of copper.

#### Simple, reliable joining method

Solvent cemented joints can be made quickly and easily without expensive equipment or certifications. Flanging and threaded joints are also possible.

## **Grooved** joints

Allow guick assembly and disassembly, pipe rotation for even wear and cleaning of individual pipe sections.

## Wide range of pressure and temperature capabilities

Operating pressures from drainage up to 230 psi and temperature range from -40°F to 176° F (-40°C to 80°C) make this product suitable for the harshest environments.

## APPLICATIONS

#### Chilled water / HVAC

Chilled Water Lines
Condensate Drain
Lines

**Cooling Tower Pipes** Humidification Supply Lines

#### **Off Shore Applications**

"Mud" Systems Topside (low pressure) Operations Vacuum Systems (Drill Chilled Water (Air Cuttings Transport) Deck Wash System – Supply & Drainage

#### **Deluge Systems** (Emergency Showers/Eye Baths) Conditioning) Potable Water Black Water Drainage Compressed Air

**Chemical Treatment** 

Tailing Lines

Mining

Slurries Water Lines Vent Piping

Secondary Loop Refrigeration **Glycol Chilled Lines** 

#### **STANDARDS**

The ABS compound used in the manufacturing 卿 of Duraplus ABS Industrial Pipe complies with the material requirements of ASTM D3965, "Standard Specification for Rigid Acrylonitrile-Butadiene-Styrene (ABS) Materials for Pipe and Fittings". The ABS material has an IZOD impact resistance of not less than 5ft.lb/in at -22°F per ASTM D256.

#### Lower installation costs

Duraplus Industrial ABS is less expensive to install because of its simple joining methods its lightweight and ease of handling.

## 6

5

8

Lower maintenance costs

Duraplus Industrial ABS has excellent chemical resistance, corrosion resistance and impact resistance resulting in a piping system that lasts longer.

## No heat, no sparks, no open flames

Pipe can be joined to fitting without the necessity of heat.

#### Abrasion resistance

The rubber-like poly-butadiene phase gives Duraplus Industrial ABS exceptionally good abrasion resistance to slurries and other abrasive media.

## DID YOU KNOW?

Duraplus Industrial ABS is an extremely versatile process piping system that combines ruggedness, chemical resistance, light weight and ease of installation.

The most common applications for Duraplus Industrial ABS utilizes its outstanding impact resistance, ductility and abrasion resistance at both low and high temperatures.



## SHORT FORM SPECIFICATIONS

#### GENERAL

Duraplus ABS is designed for industrial pressure pipe applications where the extremely high-impact resistance and ductility of the material offers some insurance against internal and external shock loadings and site abuse conditions. It's unique combination of ABS properties – non-toxicity, purity, corrosion- and chemical-resistance, toughness, low-hydraulic resistance, and the ability to perform over a wide temperature range (-40°F to +176°F) ensures excellent in-service performance and system life.

#### **MATERIAL SPECIFICATION**

Pipe and fittings shall be manufactured from a copolymeric material – Acrylonitrile Butadiene Styrene (ABS) – conforming to a 43232 cell classification in accordance with ASTM D3965.

Material for both pipe and fittings shall have a design stress of not less than 2,000 psi, and shall be designed with a 2 to 1 safety factor for a 50 year lifespan when operated under continuous pressure.

The material shall have an izod impact resistance value of not less than 6 ft./lb. at  $73^{\circ}$ F and 3 ft./lb. at  $-22^{\circ}$ F, when tested in accordance with ASTM D256, method 'A'.

## PIPE

Pipes shall be manufactured by IPEX and designed on a Standard Dimension Ratio (SDR) basis to give various pressure ratings as described below:

Pipe Class	SDR	Continuous Pressure Rating at 73°F (23°C)	Size Range
Class 90 psi	SDR 24.0	90 psi (6 bar)	10" & 12"
Class 115 psi	SDR 19.0	115 psi (8 bar)	6" & 8"
Class 145 psi	SDR 15.5	145 psi (10 bar)	1" to 8"
Class 180 psi	SDR 12.5	180 psi (12 bar)	1" to 6"
Class 230 psi	SDR 10.0	230 psi (16 bar)	3/8" to 4"

## FITTINGS

Fittings shall be of the socket type, designed for solvent welding as supplied by IPEX.

Fittings shall be designed and manufactured so that they withstand the continuous pressures applicable to the maximum pressure native of the pipe.

## **SOLVENT CEMENT**

All joints shall be made with Gray Duraplus ABS solvent cement as supplied by IPEX.

The solvent cement shall be designed to withstand continuous applied pressures up to 230 psi at 73°F.

## DESIGN AND INSTALLATION

The design and installation of ABS pressure systems shall be performed in accordance with the recommendations detailed in the Handling and Installation section of this manual, local and national regulations where applicable.

To ensure the full integrity of the completed system, all components shall be supplied by IPEX.

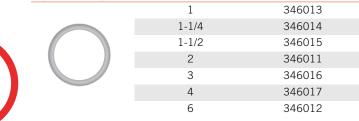
	Dimension inches	Product Code		Dimension inches	Product Code
Pipe - 90 psi a	t 73° F		Class "T" - Suitable fo	or Threading	
	10	346034		3/8	346033
	12	346035		1/2	346027
		. 00 ( l		3/4	346028
	Standard length of pipe	IS 20 feet.		1	346029
				1-1/4	346030
				1-1/2	346031
				2	346032

### Pipe - 145 psi at 73° F

$\bigcirc$	1	346003
	1-1/2	346004
	2	346005
	3	346007
	4	346008
	6	346009
	8	346010
	8	340010

Standard length of pipe is 20 feet.

### Pipe - 180 psi at 73° F



Standard length of pipe is 20 feet. Note: 180 psi pipe is a non-stock item available upon special request. Minimum runs are required.

## Cobra Pipe Clip - Polypropylene

Saddle Clip - Polypropylene

	3/8	437340
	1/2	437341
$(\lambda)$	3/4	437342
	1	437343
	1-1/4	437344
	1-1/2	437345
	2	437346
	2-1/2	437347
	3	437348
	4	437349

3/8

1/2

3/4

1

1 - 1/4

1-1/2

2

3

4

337453

337454

337455

337456

337457

337458

337459

337460

337461

Note: \* 3/8" 1/2" and 3/4" pipe clips are supplied without retaining bands.

## Pipe - 230 psi at 73° F

	3/8	346018
0	1/2	346019
	3/4	346020
	1	346021
	1-1/4	346022
	1-1/2	346023
	2	346024
	3	346025
	4	346026

The standard pipe length for 3/8" and 1/2" pipe is 10 feet. The standard length for all other sizes is 20 feet.

	Dimension inches	Product Code
Coupling Soc		
	3/8	337021
	1/2	337022
	3/4	337023
	1	337024
	1-1/4	337025
	1-1/2	337026
	2	337027
	3	337028
	4	337029
	6	337030
	8	337031
	10	337032
	12	337033

Dimension	Product
inches	Code

## Gasket - Full Face, Drilled ASA 150, Neoprene

000	1/2	337439
$\supset$	3/4	337440
00	1	337441
	1-1/4	337442
	1-1/2	337443
	2	337444
	3	337445
	4	337446
	6	337447

#### Flange - Stub Soc

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	2	337235
$\supset$	3	337236
=	4	337237
	6	337238
	8	337239
	10	337243
	12	337244

Note: A metal backing ring must be used with this flange.

Flange -	Full	Face,	Drilled	ASA	150	Soc

1/2	337353
3/4	337354
1	337355
1-1/4	337356
1-1/2	337357
2	337358
3	337359
4	337360
6	337361

Note: A metal backing ring must be used with this flange.

## Flange - Full Face, Undrilled Soc



1/2	337226
3/4	337227
1	337228
1-1/4	337229
1-1/2	337230
2	337231
3	337232
4	337233
6	337234

Note: A metal backing ring must be used with this flange.

### Gasket - Stub Flange, Neoprene

	2	337448
$\bigcirc$	3	337449
	4	337450
	6	337451
	8	337452
	10	337422
	12	337423

Note: It is essential that steel backing rings are used with all types of stub, full face and blind flanges.

	Dimension inches	Product Code
Backing Ring - G	alv, M.S. Drilled AS	SA 150
$\frown$	1/2	337426
	3/4	337427
$\left[ \begin{array}{c} 0 \end{array} \right]$	1	337428
	1-1/4	337429
	1-1/2	337430
	2	337431
	3	337433
	4	337434
	6	337435
	8	337436
	10	337437
	12	337438

Dimens	ion	Product
inche	s	Code

#### Union ABS Soc x Brass Female Thread

*3/8	337279
1/2	337280
3/4	337281
1	337282
1-1/4	337000
1-1/2	337283
2	337284

\* Discontinued when stock is depleted

337132

337133

#### 90° Elbow Soc

Note: For use with flanges.

## Blind Flange - Drilled ASA 150

	3	337364
0	4	337365
, ))	6	337366
9/	8	337367
$\bigcirc$	10	337368
	12	337383

Note: A metal backing ring must be used with this flange.

Undrilled flanges are available at the same price as drilled. Order code 131.

## Cap Soc

	3/8	337245
7	1/2	337246
	3/4	337247
	1	337248
	1-1/4	337249
	1-1/2	337250
	2	337251
	3	337252
	4	337253

## Union - EPDM Seal Soc

3/8	337270
1/2	337271
3/4	337272
1	337273
1-1/4	337274
1-1/2	337275
2	337276
3	337277
4	337278

3/4 337134 1 337135 1-1/4 337136 1-1/2 337137 2 337138 3 337139 4 337140 6 337141 8 337142 \*10 337011 \*12 337012

3/8

1/2

\*Only available in spigot x spigot.

## 45° Elbow Soc

	3/8	337156
	1/2	337157
, <u> </u>	3/4	337158
$\searrow$	1	337159
	1-1/4	337160
	1-1/2	337161
	2	337162
	3	337163
	4	337164
	6	337165
	8	337166
	*10	337013
	*12	337014
	*Only available in spigo	t x snight

\*Only available in spigot x spigot.

40

Only the correct Duraplus® cement will provide a compatible joint. All warranties void if other cement used.

Dimension	Product Code		Dimension	Product Code
inches			inches	Coue
<b>us</b> Soc		Saddle Soc		
1/2	337148		2 x 1-1/4	337205
3/4	337149		3 x 1	337207
1	337150		3 x 1-1/2	337208
1-1/4	337151		4 x 1	337209
1-1/2	337152		4 x 2	337210
2	337153		6 x 1	337211
3	337154		6 x 1-1/2	337212
4	337155		6 x 2	337213
Threads are BSP 1				
se noted ***		45° Wye Soc		
		$\bigcirc$	1/2	337214
s Sp (Contor Li	ne Radius = 4xD)		3/4	337215
3 SP (Center Li	337320		1	337216
4	337321	lΥ	1-1/4	337217
		$\smile$	1-1/2	337218
6 8	337322 337323		2	337219
8 *10	337323			
*12	337325	45° Wye - Fabri	cated Sn x Sn	
			3	337220
	radius of 10" & 12"		4	337221
om 4xD			6	337222
			8	337223
s Sp (Contor Li	ne Radius = 4xD)	Ŭ	10	337223
3 30 (Center El	337330		10	337224
4	337331		12	557225
6	337332			
8	337332	Reducer Bushin		
*10	337334		1/2 x 3/8	337050
*12	337334		3/4 x 1/2	337051
			1 x 1/2	337052
	radius of 10" & 12"	T	1 x 3/4	337053
om 4xD			1 1/4 x 1/2	337045
			1 1/4 x 3/4	337046
			1 1/4 x 1	337054
3/8	337170		1 1/2 x 1/2	337047
1/2	337171		1 1/2 x 3/4	337048
3/4	337172		1 1/2 x 1	337055
1	337172		1 1/2 x 1 1/4	337056
1-1/4	337174		2 x 3/4	337049
1-1/2	337175		2 x 1	337057
2	337176		2 x 1 1/4	337058
3	337176		2 x 1 1/2	337059
3 4			3 x 1 1/2	337061
	337178		3 x 2	337062
6	337179		4 x 3	337064
8	337180		6 x 4	337065
*10	337015		8 x 6	337066
*12	337016		10 x 8	337067
available in spigot	tees.		10 x 8 12 x 10	
			12 X 10	337068

\*\*\* All Threads a otherwise noted

## 90° Bend - Long Radius Sp (Ce

90° Bend - Short Radius Soc

3	337320
4	337321
6	337322
8	337323
*10	337324
 *12	337325

\* Please note cen varies from 4xD

## 45° Bend - Long Radius Sp (Ce

	3	337330
$\frown$	4	337331
	6	337332
	8	337333
	*10	337334
	*12	337335

\* Please note cer varies from 4xD

Tee Soc



3/8	337170
1/2	337171
3/4	337172
1	337173
1-1/4	337174
1-1/2	337175
2	337176
3	337177
4	337178
6	337179
8	337180
*10	337015
*12	337016

\* Only available

Only the correct Duraplus® cement will provide a compatible joint. All warranties void if other cement used.

	Dimension inches	Product Code		Dimension inches	Product Code
Reducer Bushing	Male Thread x Fema	le Thread	Female Adapter Sp	x Female Thread	
	**1/2 x 3/8	337075		1/2	337257
	**3/4 x 1/2	337076		3/4	337258
	**1 x 3/4	337077		1	337259

\*\* Discontinued when stock is depleted All Threads are BSP tapered unless otherwise noted

emale Adapter Sp x Female Thread				
	1/2	337257		
	3/4	337258		
	1	337259		
	1-1/4	337260		
	1-1/2	337261		
	2	337262		

### Reducer Bushing Sp x Female Thread

Reducer Coupler Soc

	**1/2 x 3/8	337072		
	**3/4 x 1/2	337073		
	**1 x 3/4	337074		
	** Discontinued when st			
	All Threads are BSP tapered unless otherwise			
	noted			

1/2 x 3/8

3/4 x 1/2

1 x 3/4

1-1/4 x 1

1-1/2 x 1-1/4

2 x 1-1/2

3 x 2

4 x 3

6 x 4

8 x 6

10 x 8

12 x 10

337120

337121

337122

337123

337124

337125

337126

337127

337128

337129

337130

337131

## Nipple Sp x NPT 3/8 1/2

337341 3/4 337342 1 337343 1-1/4 337344 1-1/2 337345 2 337346 3 337347 4 337348

337340

Note: Systems using plastic threaded components are restricted to 180 psi. The use of PTFE sealing tape is recommended. All Threads are BSP tapered unless otherwise noted

#### Plug Male Thread

1/2	337264
3/4	337265
1	337266
1-1/4	337267
1-1/2	337268
2	337269

### Adapter Coupling Soc x Female Thread

1/2	337037
3/4	337038
1	337039
1-1/4	337040
1-1/2	337041
2	337042

VM Manual Diap	hragm Valve - EPD	M Diaphragm Sp
	1/2	337643
Ē	3/4	337644
	1	337645
	1-1/4	337646
	1-1/2	337647
	2	337648
	3	337649

Note: Other diaphragm materials are available upon request

Dimension	Product
inches	Code

#### VKD True Union Ball Valve - EPDM Seals Soc

<u></u>	3/8	337801
	1/2	337802
	3/4	337803
	1	337804
	1-1/4	337805
	1-1/2	337806
	2	337807
	3	337808
	4	337809

#### Dimension Product inches Code

## FK, Viton<sup>®</sup> Seals - Glass filled PP body

	,
2	337656
3	337657
4	337658
6	337659
8	337660

Chemical duty (CD) - incorporating more chemically resistant components, this valve can be used with a wide range of organic or inorganic chemicals even at elevated temperatures.

## Single Union Ball Check Valve - EPDM Soc

3/8	337727
1/2	337728
3/4	337729
1	337730
1-1/4	337731
1-1/2	337732
2	337733
3	337734

### RV Y-Strainer EPDM Seals Soc

1/2	337739
3/4	337740
1	337741
1 1/4	337742
1 1/2	337743
2	337744

Liquid Product Quantity Code

## L Port Ball Valve - EPDM Soc

	**1/2	337720
	**3/4	337721
	**1	337722
	**1 1/4	337723
	**1 1/2	337724
	**2	337725

\*\* Discontinued when stock is depleted Note: T Port valves are available upon Request All Threads are BSP tapered unless otherwise noted

## FK, EPDM Seals - Glass filled PP Body

	2
	3
	4
	6
	8

General service (GS) - offered primarily for use with water, but suitable for a wide range of diluted chemicals, swimming pools, irrigation, potable water, etc. The GS valve is also suitable for compressed air and gases.

## Solvent Cement



1 pint	337466
1 quart	337467

## Solvent Cement



1 pint	337468
1 quart	337469

## Joints

An indication of the number of joints likely to be made per quart of Duraplus<sup>®</sup> cement is as follows (it is recommended that MEK Cleaner order equals one-half the quantity of solvent cement required):

Pipe Size inches	Number of Joints
3/8 - 1	290
1-1/4 - 2	144
3	48
4	32
6	16
8	10
10	4
12	4

43

Only the correct Duraplus® cement will provide a compatible joint. All warranties void if other cement used.

337651

## A Safe Place to Grow



## **IPEX Protects Your Investment**

Certain environments demand fail-safe systems. No leaks. No risk. IPEX understands the complexity of design and installation for demanding **DOUBLE CONTAINMENT** 

APPLICATIONS. And, unlike other manufacturers, our specialists are part of a division of IPEX dedicated solely to the design, production and installation of state-of-the-art double containment systems. With more than 20 years of experience and success, we are the proven experts.

The IPEX family of double containment systems includes: **Guardian™** PVC and CPVC, and **Clear-Guard™** PVC pressure and drainage systems, **Encase™** PolyPro drainage systems, CustomGuard<sup>®</sup> FRP and metal pressure systems and Centra-Guard<sup>™</sup> leak detection systems.

Safety and environmental concerns are top priorities on today's industrial agenda. Reduction of emissions, energy conservation and prevention of ground water contamination are some of the areas where regulations are increasingly defining an important line between utilization and exploitation of our planet's resources.

For most common chemical-waste or process applications, IPEX offers systems that are both simple yet highly advanced technologies. Safety and environmental concerns are top priorities on today's industrial agenda. Reduction of emissions, energy conservation and prevention of ground water contamination are some of the areas where regulations are increasingly defining an important line between utilization and exploitation of our planet's resources.

For most common chemical-waste or process applications, IPEX offers systems that are both simple yet highly advanced state-of-the-art technologies. These systems utilize pre-assembled components that guarantee reliability, ease of installation, fewer joints (up to 40% less) and quick delivery.

Certain environments demand fail-safe systems. No leaks. No risk. The professionals at IPEX understand the complexity of design and installation for demanding double containment applications.

# Double Containment Systems



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## ENCASE ACID WASTE PP DOUBLE CONTAINMENT 1-1/2" - 8" (38mm - 200mm

## Encase

At the heart of our patented Encase polypro system is its electrofusion fitting with a groundbreaking heavy-gauge resistance wire molded into the socket. The result is a premier system that offers considerable reduction of installation time and the highest quality bubble-tight joints available.

## DID YOU KNOW?

Encase is a polypropylene piping system that uses proven Enfusion joining methods to provide an easyto-install, safe, reliable and costeffective method to convey chemical waste under gravity-flow conditions.

## ADVANTAGES

## Polypropylene Material

- Thirty years of success in chemical waste applications
- High corrosion resistance
- Wide temperature range
- Excellent chemical resistance

## Same Material Inside and Out

- Eliminates differential expansion problems
- Chemical resistance is the same for the entire piping system
- System integrity is maintained in the event of a primary pipe leak

## **Restrained System**

- Expansion anchor plates are installed on each fitting to control expansion
- No expansion loops necessary

## Full Product Range

- 1-1/2" to 8" primary sizes available
- Manufactured in both non-flame retardant as well as flame retardant material for above ground installation

## Drainage Pattern Fittings

- Ensures smooth chemical flow.
- Enfield piping has been used for chemical waste for over 25 years

## Modular Design

- Components are factory fabricated. The only site joining necessary is the fusion of couplings to pipes and fittings
- Reduces labor costs

## Fast Joining Method

- All site joints are made by electrofusion using an Enfusion Hand Held Unit.
- Quick and simple to make without the need for costly and cumbersome butt fusion machines
- Proven technology
- Narrower trench widths than for butt fusion, resulting in quicker and cheaper installation
- Joints can be made in the trench which reduces installation time
- Automatic microprocessor-controlled Enfusion unit ensures joint repeatability

## Easy System Testing

- The primary pipe can be inspected and tested prior to closing the secondary joint (impossible with butt-welded systems)
- Any suspect primary joints can be re-fused prior to final closure of the secondary pipe

## Leak Detection Compatible

- Encase is compatible with all common types of leak detection systems
- Upon request, pipe is furnished with knot-free twine to allow insertion of a pull rope for leak detection cable installation minimizing installation time.

## Full Product Backup

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- Expert personnel are available to assist in every facet of the Encase product

Material	Carrier	Containment
PP	1-1/2" - 8"	4" - 12"



## SHORT FORM SPECIFICATIONS

#### GENERAL

Acid waste double containment drain lines shall be Encase, manufactured by IPEX, with no substitutions. Pipe and fittings shall be manufactured from Schedule 40 polypropylene and joined by the Enfusion method.

#### MATERIAL

Pipe, fittings, internal pipe supports and anchor plates shall be manufactured from Type 1 homopolymer or Type 2 copolymer polypropylene material as described in ASTM D4101.

#### PIPE AND FITTINGS – CONSTRUCTION

All pipe fittings shall be factory assembled and of unitized construction, with the primary and secondary components integrally anchored together to prevent movement of the primary pipe/fitting with in the containment pipe/fitting. All piping components shall be manufactured to Schedule 40 dimensions. The primary pipe shall be adequately supported by means of support plates welded to the primary pipe. Anchor plates shall be provided at each end of the pipe/fitting section to restrain pipe expansion. All anchor plates must be mechanically located in a machined recess on the inside of each secondary pipe/fitting and welded to both the primary and secondary pipe/fitting sections.

### FACTORY WELDED JOINTS

All factory joints shall be made either by butt fusion or Enfusion. Joining by means of fillet welding is expressly forbidden.

## SITE JOINTS

All site joints shall be made using Enfusion couplings, manufactured from polypropylene with a nickel/chrome resistance wire, molded in place. Components with copper wire elements are prohibited. Solvent, butt-welded or fillet-welded site joints are also prohibited.

#### INSTALLATION

Installation shall be in accordance with the contract drawings, the manufacturer's recommendations and the local plumbing code. The entire installation shall be installed in proper alignment and free of stress.

#### TESTING

The system shall be tested in accordance with the manufacturer's recommendations and the local plumbing code. The primary pipe shall be tested prior to making the secondary joints. If Secondary pipe cannot be hydro-tested, as determined by the engineer or authority having jurisdiction, then the use of nitrogen or air at a MAXIMUM 5 psi (gauge) shall be allowed. It is imperative that a working-pressure regulator be used during the pneumatic test to ensure that over-pressurization of the PVC, beyond 5 psi, cannot occur. The following must also be noted: Air or nitrogen under pressure is compressed and therefore poses a potential hazard. If a failure of the pipe or fitting occurs during such test, the air exits at the failure point and expands rapidly. This increase in velocity can cause the system to fail in a catastrophic mode. Therefore during such air test all personnel involved in the test or present in the test surrounding area must be aware of such a possibility and take all necessary precautions. Precautions include, but are not limited to, taking extreme care not to impact or damage the system in any way. Such procedure is a limited exception to IPEX standard policy which forbids the use of its rigid systems with any compressed gases.

		Dimensio	on inches	Product		Dimensi	on inches	Product
		Primary	secondary	Code		Primary	secondary	Code
	Schedule 40 Pip	e Soc x Sp (2	0' Nominal Le	ngths)	1/8 Bend Soc x Sp	)		
	1	1-1/2	4	246040		1-1/2	4	231141
	2	4	246050	<b>A</b>	2	4	231142	
	3	6	246060		3	6	231143	
	4	8	246070		4	8	231144	
	6	10	246020		6	10	231139	
		8	12	246030		8	12	231140

Schedule 40 Pipe Spool	Soc x Soc (5' Nominal Lengths)
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	1-1/2	4	231313
	2	4	231314
	3	6	231315
<b>I</b>	4	8	231316
	6	10	231311
	8	12	231312

1/4 Bend Soc x Sp	D		
1	1-1/2	4	231134
	2	4	231135
	3	6	231136
	4	8	231137
	6	10	231132
	8	12	231133

## Secondary Coupling Soc

	-	4	231114
	-	6	231116
	-	8	231118
	-	10	231110
	_	12	231112

## 45° Wye Soc x Sp x Soc

1-1/2	4	231153
2	4	231154
3	6	231155
4	8	231156
6	10	231151
8	12	231152
	2	2 4 3 6 4 8 6 10

## Primary Coupling Soc

	5		
	1-1/2	-	257141
	2	-	257147
	3	-	257150
	4	-	257154
	6	-	257158
	8	-	257161

### Reducing Wye Soc x Sp x Soc

	2 x 1-1/2	4 x 4	231187
	3 x 1-1/2	6 x 4	231188
	3 x 2	6 x 4	231189
	4 x 2	8 x 4	231190
	4 x 3	8 x 6	231191
·	6 x 2	10 x 4	231181
	6 x 3	10 x 6	231182
	6 x 4	10 x 8	231183
	8 x 3	12 x 6	231184
	8 x 4	12 x 8	231185
	8 x 6	12 x 10	231186

## Secondary Repair Coupling Soc

 -	4	231004
-	6	231006
-	8	231008
-	10	231010
-	12	231009

## Combination Wye & 1/8 Bend Soc x Sp x Soc

1-1/2	4	231203
2	4	231204
3	6	231205
4	8	231206
6	10	231201
8	12	231202
	2	2 4 3 6 4 8 6 10

Encase components should only be joined using IPEX Control Units. NFRPP is the standard material of construction for all Encase components. FRPP is available on request.

Dimensi	on inches	Product
Primary	secondary	Code

## Dimension inches Product Primary secondary Code

Reducing Combin	nation Wye &	<b>1/8 Bend</b> S	oc x Sp x Soc
	2 x 1-1/2	4 x 4	231227
	3 x 1-1/2	6 x 4	231228
	3 x 2	6 x 4	231229
	4 x 2	8 x 4	231230
	4 x 3	8 x 6	231231
	6 x 2	10 x 4	231221
	6 x 3	10 x 6	231222
	6 x 4	10 x 8	231223
	8 x 3	12 x 6	231224
	8 x 4	12 x 8	231225
	8 x 6	12 x 10	231226

## P-Trap Soc x Sp

	3	6	231373
	4	8	231374
	6	10	231371
	8	12	231375

## Floor Drain Sp

	1-1/2	4	231400
	2	4	231402
	3	6	231403
	4	8	231404
	6	10	231401

## Double Wye Soc x Sp

	1-1/2	4	231243
	2	4	231244
	3	6	231245
	4	8	231246
	6	10	231241
	8	12	231242

## Reducing Coupling Soc x Sp

and mg of april			
-	2 x 1-1/2	4 x 4	231347
	3 x 1-1/2	6 x 4	231348
	3 x 2	6 x 4	231349
	4 x 1-1/2	8 x 4	231324
	4 x 2	8 x 4	231350
	4 x 3	8 x 6	231351
	6 x 1-1/2	10 x 4	231352
	6 x 2	10 x 4	231341
	6 x 3	10 x 6	231342
	6 x 4	10 x 8	231343
	8 x 3	12 x 6	231344
	8 x 4	12 x 8	231345
	8 x 6	12 x 10	231346

## P-Trap Soc x Sp

 	1-1/2	4	231361
	2	4	231372
U			

## End Cap Soc

	1-1/2	-	231462
	2	-	231463
<u> </u>	3	-	231464
	4	-	231465
	6	-	231466
	8	-	231467
	10	-	231832
	12	-	231833

## End Seal Soc x Sp

	1-1/2	4	231483
	2	4	231484
	3	6	231485
	4	8	231486
	6	10	231481
	8	12	231482

## Flange - ASA 150 Soc

0			
	1-1/2	-	257361
	2	-	257365
	3	-	257366
	4	-	257367
	6	-	257368
	8	-	257369
	10	-	257362
	12	-	257363

Encase components should only be joined using IPEX Control Units. NFRPP is the standard material of construction for all Encase components. FRPP is available on request

	Dimensi	on inches	Product
	Primary	secondary	Code
Blind Flange - AS	SA 150		
	1-1/2	-	231453
- 卡 <b>书</b>	2	-	231454
	3	-	231455
-++	4	-	231456
	6	-	231457
刮	8	-	231458
	10	-	231451
	12	-	231452
Access Tee Soc x	Sn x Sn		
	1-1/2	4	231425
	2	4	231426
	3	6 x 4	231421
╓╼┛│┖╌╖	4	8 x 4	231422
	6	10 x 4	231423
<u></u>			

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## Cleanout Sp

	1-1/2	-	257232
	2	-	257235
	3	-	257238
	4	-	257241
	6	-	257244

8

12 x 4

231424

Connector Cable Current Style Machine

Cleanout	Assembly	Soc

	1-1/2	4	231383
	2	4	231384
┼┼┼╾╸┈╶┼╸┼┠═┱┠╼ ┝╝╪╾╸╸┥╻┝╏═╛	3	6	231385
	4	8	231386
	6	10	231381
	8	12	231382

## Link Cable c/w EZ Connector

 2 ft. EZ	4	257268
5 ft. EZ	6	257269
10 ft. EZ	8	257270
15 ft. EZ	10	257271

231302

231301

257124

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## Encase Link Cable c/w Link Lead

la	mp c/w Brass	Nut			5 ft.	
	1-1/2	-	231741			
	2	-	231742			
_	*3	-	231411			
B	4	-	231743			
	6	-	231744			
	8	-	231745			

\* Designed to be left on.

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Encase components should only be joined using IPEX Control Units. NFRPP is the standard material of construction for all Encase components. FRPP is available on request.

	Dimensi Primary	on incries secondary	Product Code		Dimensio Primary
Above Ground Le	ak Detection	n Station with	Sensor	5 Zone Panel	
	4	-	231834		-
	6	-	231835		
	8	-	231836		
	10	-	231837	<u> </u>	

## Below Ground Leak Detection Station with Sensor

		4	-	231838
		6	-	231839
		8	-	231840
		10	-	231841
	and the second se	12	-	231842
<u>1</u>				

## 10 Zone Panel

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2006	-			P				
2004		Ļ	÷	÷	Ļ			
		-			5	Ш		
6	)				C	Г		

## Leak Detection Jumper Cable

$\sim$	-	-	631186

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Product Code

631188

631189

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## GUARDIAN VINYL DOUBLE CONTAINMENT SYSTEMS

## Gu∕rdian™

For more than 15 years, Guardian systems have been the benchmark in pressure and drainage double containment. Guardian systems are available in tough industrial grade PVC and even tougher high temperature CPVC. For instant leak detection of overhead piping, Clear-Guard clear PVC containment pipe is also available. Guardian's patented Centra-Lock design reduces the required joints by 40 - 60%.

## SPECIFICATIONS

## **Material Selection**

Xirtec®140 PVC and Corzan® CPVC are the chosen materials for the Guardian systems. IPEX controls not only the design and fabrication of the systems, but also the blending of the PVC resin, the extrusion and injection molding of most components. This unparalleled consistency of quality and resin as well as dimensional compatibility results in superior systems that are unmatched in the industry. Clear-Guard utilizes a fail-safe, fully pressure rated clear PVC that uses a solvent cement jointing method identical to traditional vinyl pressure pipe. This eliminates the need for expensive caulking guns and epoxy adhesive for assembly. Clear-Guard can be used in conjunction with both Schedule 40 and 80 Xirtec140 PVC or Corzan CPVC primary pipe.

#### Design

Guardian and Clear-Guard systems offer a complete selection of pretested modular components which are extremely easy to install. Our Centra-lok<sup>™</sup> patented design allows IPEX to offer vinyl systems which average up to 60% fewer overall joints and up to 10% fewer field joints. Since joints are always the most common source of premature failures and leaks, it is easy to realize the immense impact the Centra-lok design has on maintenance, repair and installation costs. The patented ingenuity and simplicity of the Centra-lok design also reduces the purchase cost of IPEX systems, making Guardian and Clear-Guard the industry's most cost-effective vinyl system. As with all our containment systems, the IPEX patented Centra-Guard<sup>™</sup> point-of-collection or cable leak detection systems are also available.

## General

Each contained piping system shall consist of Xirtec®140 PVC primary piping system supported within a Xirtec®140 PVC secondary containment housing. Carrier fitting sizes 1/2" through 4" will use Centra-Lok [U.S. Patent No. 5,398,973] molded supports minimizing the number of field (factory assembled) fitting joints. Carrier sizes 6" and larger will use IPEX standard polypropylene fitting discs to support and centralize. Each system shall be provided with suitable drains and vents and be designed to provide complete drainage of both the primary and secondary containment piping. Interstitial supporting devices shall be made from Polypropylene Centra-Guide supports and shall be provided within the secondary containment pipe, and shall be designed to allow continuous drainage in the annular space to the drain points. Drain fittings shall be designed to allow a valve attachment to be made so that the secondary containment compartment may be readily drained and manually checked for leaks.

Material	Carrier	Containment
Xirtec140 PVC	1/2" - 12"	2" - 18"
Corzan CPVC	1/2" - 12"	2" - 18"
Clear-Guard PVC	n/a	2" - 8"

Larger sizes are available from IPEX.

## FOR PRICING CONTACT YOUR IPEX REPRESENTATIVE.

## DID YOU KNOW?

Made from PVC and Corzan® CPVC, these systems offer a complete selection of pre-tested modular components that are considered unmatched in the industry.



## THE CUSTOMGUARD OPTION

## CustomGu@rd®

Custom-designed and fabricated double containment systems including dissimilar material systems, CustomGuard is unlike other systems that try to run everything through the same material. Our specialists will recommend and provide the absolute best system for each individual application, looking not only at chemical compatibility but also at cost (material and installation), life expectancy and turn around time.

For applications with more demanding mechanical, chemical and/or thermal requirements, IPEX has developed our CustomGuard offering. CustomGuard includes a variety of different system choices ranging from Fluoropolymers (e.g. PVDF), Thermosets (FRP); and carbon and stainless steel to hybrid combinations. Applications that require such materials are obviously complex, each demanding expertise and specialized knowledge to design an effective system. The CustomGuard option includes material selection, design, specification support (if needed) and fabrication of preassembled spooled pieces to minimize installation time and field joints.

## DID YOU KNOW?

Together with Encase and Guardian, Custom Guard sets IPEX apart from any other double containment system. Custom Guard is available in several different materials. Unlike other manufacturers, IPEX is not constrained by a limited material selection. This variety enables IPEX to provide customers with the best solution for their double containment needs.

Material	Carrier	Containment
FRP/Metals/Dissimilar	1/2" - 20"	2" - 26"

## FOR PRICING CONTACT YOUR IPEX REPRESENTATIVE.

## **SPECIFICATIONS**

## **Material Selection**

Carbon and stainless steel, copper, fiberglass (polyester and vinylester resins), PVDF, PP and dissimilar materials, are all available in CustomGuard<sup>®</sup> systems. This comprehensive offering, unmatched by any one company, gives IPEX the unique ability to examine just about any double containment requirement and truly offer the best suited, most cost-effective system. While other manufacturers have vested interests in recommending their one and only material/system, IPEX isn't confined by that limitation.

## Design

Drawing on more than 15 years of experience in double containment, IPEX has developed a variety of product-specific designs to maximize efficiency and reduce installation costs. As with all our containment systems, our own patented Centra-Guard<sup>™</sup> point-of-collection or cable leak detection systems are also available.

## General

Each contained piping system shall consist of Schedule 40 A-53 Carbon Steel primary piping system supported within a UL FRP secondary containment housing. Each system shall be provided with suitable drains and vents and be designed to provide complete drainage of both the primary and secondary containment piping. Interstitial supporting devices shall be made from Polypropylene Centra-Guide supports and shall be provided within the secondary containment pipe, and shall be designed to allow continuous drainage in the annular space to the drain points. Drain fittings shall be designed to allow a valve attachment to be made so that the secondary containment compartment may be readily drained and manually checked for leaks.

## THE CLEAR-GUARD OPTION

## Clear-Gu@rd™

Clear-Guard's fail-safe, fully pressure rated clear containment system allows for easy detection of leaks and eliminates the risks associated with piping aggressive chemicals overhead. Clear-Guard utilizes Guardian's patented Centra-Lok fitting design, which reduces the required joints by 40-60%. Fittings are available in clear or opaque containment fittings.

Material	Carrier	Containment
PVC	-	1/2" - 8"

## FOR PRICING CONTACT YOUR IPEX REPRESENTATIVE.

## **SPECIFICATIONS**

#### General

Each contained piping system shall consist of Xirtec 140 PVC or Corzan CPVC primary piping system supported within a Clear-Guard Schedule 40 clear PVC secondary containment housing. Carrier fitting sizes 1/2" through 4" will use Centra-Lok [U.S.Patent No. 5,398,973] molded supports minimizing the number of field (factory assembled) fitting joints. Each system shall be provided with suitable drains and vents and be designed to provide complete drainage of both the primary and secondary containment piping. Interstitial supporting devices shall be made from Polypropylene Centra-Guide supports and shall be provided within the secondary containment pipe, and shall be designed to allow continuous drainage in the annular space to the drain points. Drain fittings shall be designed to allow a valve attachment to be made so that the secondary containment compartment maybe readily drained and manually checked for leaks.



## CENTRA-GUARD LEAK DETECTION

## Centra-Gu@rd™

In many situations, as for example in buried systems, double containment protection by itself may not be enough. In these applications it is critical that a leak is immediately detected and located.

Although many different leak detection systems are available on the market today, only one offers a combination of advanced features, reliability, reusability and cost-effectiveness: Centra-Guard, an innovative and patented leak-detection system.

No cables to string during installation, no false alarms due to condensation and always re-usable, this patented system features self-contained capacitive proximity sensors (with sensing point adjustment) connected to a NEMA4 enclosed control panel with both audible and visual signals. Part of this ingenious system are its two different sensor housing designs; one specifically for over-head applications and one for below-grade applications.

The initial cost of the Centra-Guard system is offset tenfold by the savings realized in avoiding the much higher costs of an environmental cleanup or lost production.

## FOR PRICING CONTACT YOUR IPEX **REPRESENTATIVE**.

## APPLICATIONS

 above-ground suspended pipeline applications, with sensors housed in a saddle-type clamp, as well as underground pipeline systems with drip leg assembly.

## **OVERVIEW**

The basic concept behind cable leak detection is that a monitor detects any changes in the electrical properties of the cable caused by contact with a liquid. The monitor then raises an alarm in the plant to warn operators that a leak has been detected. Usually the detection system will pinpoint the leak and report its location. This allows operators to quickly rectify the situation.

Centra-Guard is the only non-intrusive leak detection system available. The sensor never comes in contact with the media.





#### CHOOSE FROM A WIDE RANGE OF SYSTEM OPTIONS

IPEX offers an extremely wide array of materials and sizes. You can specify virtually any piping material to create a system that contains whatever corrosive or hazardous substance your application handles. If you don't see what you need listed here, call us! Other systems or sizes may be available, or we may have suggestions for substitutions.

CarrierContainmentinchesPVC 80PVC 801/2 - 12PVC 80PVC 401/2 - 12PVC 40PVC 401/2 - 12PVC 0WWPVC 0WV1-1/2 - 12PVC 80CS SCH 101/2 - 12CPVC 80PVC 801/2 - 12CPVC 80PVC 801/2 - 12CPVC 80CS SCH 101/2 - 12CPVC 80CS SCH 101/2 - 12CPVC 80CS SCH 101/2 - 12CPVC 80CPVC 801/2 - 2NAT PP 80PVC 801/2 - 2RED PVDF 80CPVC 801/2 - 2NAT PVD 80PVC 801/2 - 2SAT APS0PVC 801/2 - 2SAT APS0PVC 801/2 - 8SAU A106B CS BWPVC 801/2 - 8SAU A106B CS SWFRP1/2 - 12SAU A106B CS SWFRP1/2 - 2SAU A106B CS SWFRP1/2 - 2SAU A106B CS SWFRP1/2 - 2SAU A106B CS SWPVC 801/2 - 8SAU A106B CS SWFRP1/2 - 2SAU A106B CS SWPVC 801/2 - 8SAU A106B CS SWPVC 801/2 - 8SAU A53 BLK SWPVC 801/2 - 8SAU A53 BLK SWPVC 801/2 - 8SAU A106B CS SWFRP1/2 - 2SAU A106B CS SWFRP1/2 - 2SAU A106B CS SWPVC 801/2 - 8SAU A106B CS SWFRP1/2 - 2SAU A106B CS SWFRP1/2 - 2SAU A106B CS SWFRP1/2 - 2<	SYST	EM	Carrier SIZE
PVC 80         PVC 40         1/2 - 12         S           PVC 40         PVC 40         1/2 - 12         S           PVC 0WV         PVC 0WV         1-1/2 - 12         S           PVC 80         CS SCH 10         1/2 - 12         S           PVC 80         CPVC 80         1/2 - 12         S           PVC 80         PVC 40         1/2 - 12         S           PVC 80         PVC 40         1/2 - 12         S           PVC 80         PVC 40         1/2 - 12         S           SPVC 80         PVC 40         1/2 - 2         S           NAT PP 80         PVC 80         1/2 - 2         S           NAT PP 80         PVC 80         1/2 - 2         S           SED PVDF 80         PVC 80         1/2 - 2         S           SENFUSION PP         PVC 80         1/2 - 8         S           SEA0 A106B CS SW         PVC 80         1/2 - 8         S           SEA0 A106B CS SW         FRP         1/2 - 12         S           SEA0 A106B CS SW         FRP         1/2 - 2         S           SEA0 A106B CS SW         FRP         1/2 - 2         S           SEA0 A533 BLK SW         PVC 40         1/2 - 8	Carrier	Containment	inches
C 40       PVC 40       1/2 - 12       \$80 A53         C DWV       PVC DWV       1-1/2 - 12       \$10 T30         C 80       C S SCH 10       1/2 - 12       \$10 T30         WC 80       CPVC 80       1/2 - 12       \$10 T30         WC 80       PVC 80       1/2 - 12       \$10 T30         WC 80       PVC 80       1/2 - 12       \$10 T30         WC 80       CS SCH 10       1/2 - 12       \$40 T31         WC 80       CS SCH 10       1/2 - 2       \$40 T31         WC 80       CS SCH 10       1/2 - 2       \$40 T31         WC 80       PVC 80       1/2 - 2       \$40 T31         SED PVDF 80       PVC 80       1/2 - 2       \$40 T31         FUSION PP       PVC DWV       1/2 - 6       \$40 T31         S0 A106B CS BW       PVC 80       1/2 - 8       \$10 T31         S0 A106B CS BW       PVC 80       1/2 - 8       \$10 T31         S0 A106B CS BW       FRP       1/2 - 12       \$40 T30         S0 A106B CS BW       FRP       1/2 - 12       \$40 T30         S0 A106B CS BW       FRP       1/2 - 12       \$40 T30         S0 A106B CS SW       FRP       1/2 - 12       \$40 T30	C 80	PVC 80	1/2 - 12
V/C DWV       PVC DWV       1-1/2 - 12       S10 T304L SS         V/C 80       CS SCH 10       1/2 - 12       S10 T304L SS         PVC 80       PVC 80       1/2 - 12       S10 T304L SS         PVC 80       PVC 80       1/2 - 12       S10 T304L SS         PVC 80       PVC 80       1/2 - 12       S10 T304L SS         PVC 80       CS SCH 10       1/2 - 12       S40 T316L SS         PVC 80       CS SCH 10       1/2 - 2       S40 T316L SS         AT PP 80       PVC 80       1/2 - 2       S40 T316L SS         ED PVDF 80       PVC 80       1/2 - 2       S40 T304L SS         STPUSION PP       PVC 80       1/2 - 2       S40 T304L SS         SAO T304L SS       S10 T304L SS       S10 T304L SS         SAO T304L SS       S10 T304L SS       S10 T304L SS         SAO T304L SS       S10 T304L SS       S10 T304L SS         SAO T304L SS       S10 T304L SS       S10 T304L SS         SAO T304L SS       S10 T304L SS       S10 T304L SS         SAO T304L SS       S10 T304L SS       S10 T304L SS         SAO T304L SS       S10 T304L SS       S10 T304L SS         SAO T304L SS       S10 T304L SS       S10 T304L SS         SAO T304L SS	/C 80	PVC 40	1/2 - 12
AVC 80CS SCH 101/2 - 12S10 T304L SS BVSPVC 80CPVC 801/2 - 12S10 T304L SS BVSPVC 80PVC 801/2 - 12S10 T304L SS BVSPVC 80CS SCH 101/2 - 12S10 T304L SS BVSPVC 80CS SCH 101/2 - 12S40 T316L SS BVSPVC 80PVC 801/2 - 2S40 T316L SS BVSPVC 80PVC 801/2 - 2S40 T316L SS BVAAT PP 80PVC 801/2 - 2S40 T304L SS SVSRED PVDF 80PVC 801/2 - 2S40 T304L SS SVAAT PVB0PVC 801/2 - 2S40 T304L SS SVSRED PVDF 80PVC 801/2 - 2S40 T304L SS SVSA0 A53B CS BWPVC 801/2 - 8S10 T304L SS SVS40 A53B CS BWPVC 801/2 - 8S10 T316L SS SVS40 A53B CS BWPVC 801/2 - 8S10 T316L SS SVS40 A53B CS BWPVC 801/2 - 12S40 T304L SS BVS40 A106B CS BWPVC 401/2 - 12S40 T304L SS BVS40 A106B CS BWPVC 401/2 - 2S40 T304L SS BVS40 A53B THRDPVC 401/2 - 8S10 T316L SS BVS40 A53B BLK SWS40 A53 BLK SWS40 A53 BLK SWS40 A53 BLK SWS40 A106B CS SWPVC 801/2 - 8S10 T304L SS BVS40 A53B BLK SWPVC 801/2 - 8S10 T316L SS SVS40 A53B BLK SWPVC 801/2 - 8S10 T316L SS SVS40 A53B BLK SWPVC 801/2 - 8S10 T316L SS SVS40 A53B BLK SWPVC 801/2 - 8S1	PVC 40	PVC 40	1/2 - 12
CPVC 80         CPVC 80         1/2 - 8         S10 T0304L SS BW           CPVC 80         PVC 80         1/2 - 12         S10 T304L SS BW           CPVC 80         PVC 40         1/2 - 12         S10 T304L SS BW           CPVC 80         CS SCH 10         1/2 - 12         S10 T304L SS BW           CPVC 80         CS SCH 10         1/2 - 12         S40 T316L SS BW           NAT PP 80         PVC 80         1/2 - 2         S40 T316L SS BW           NAT PP 80         PVC 80         1/2 - 2         S40 T304L SS SW           RED PVDF 80         PVC 80         1/2 - 2         S40 T304L SS SW           RED PVDF 80         PVC 80         1/2 - 2         S40 T304L SS SW           S40 A53B CS BW         PVC 80         1/2 - 2         S40 T304L SS SW           S40 A106B CS SW         PVC 80         1/2 - 8         S10 T304L SS SW           S40 A106B CS BW         FRP         1/2 - 12         S40 T304L SS SW           S40 A106B CS SW         FRP         1/2 - 12         S40 T304L SS SW           S40 A106B CS SW         FRP         1/2 - 12         S40 T304L SS SW           S40 A106B CS SW         FRP         1/2 - 2         S40 T304L SS SW           S40 A106B CS SW         FRP         1/2 - 2	PVC DWV	PVC DWV	1-1/2 - 12
CPVC 80PVC 801/2 - 12S10 T304L SS BWCPVC 80CS SCH 101/2 - 12S40 T316L SS BWNAT PP 80PVC 801/2 - 2S40 T316L SS BWNAT PP 80PVC 401/2 - 2S40 T316L SS BWRED PVDF 80PVC 801/2 - 2S40 T316L SS BWRED PVDF 80PVC 801/2 - 2S40 T316L SS BWRED PVDF 80PVC 801/2 - 2S40 T304L SS SWRED PVDF 80PVC 801/2 - 2S40 T304L SS SWS40 A53B CS BWPVC 801/2 - 8S10 T304L SS SWS40 A106B CS SWPVC 801/2 - 8S10 T316L SS SWS40 A106B CS SWPVC 801/2 - 12S40 T304L SS SWS40 A106B CS SWFRP1/2 - 12S40 T304L SS BWS40 A106B CS SWFRP1/2 - 12S40 T304L SS SWS40 A106B CS SWFRP1/2 - 12S40 T304L SS BWS40 A106B CS SWFRP1/2 - 12S40 T304L SS BWS40 A106B CS SWFRP1/2 - 2S40 T304L SS BWS40 A106B CS SWFRP1/2 - 2S40 T304L SS SWS40 A53 BLK SWFRP1/2 - 2S40 T304L SS SWS40 A53 BLK SWFRP1/2 - 2S40 T304L SS SWS40 A53 BLK SWFRP1/2 - 2S40 T304L SS SWS40 A106B CS SWPVC 801/2 - 8S10 T316L SS SWS40 A106B CS SWFRP1/2 - 2S10 T304L SS SWS40 A106B CS SWPVC 801/2 - 8S10 T304L SS SWS40 A106B CS SWFRP1/2 - 2S40 T316L SS SW </td <td>PVC 80</td> <td>CS SCH 10</td> <td>1/2 - 12</td>	PVC 80	CS SCH 10	1/2 - 12
CPVC 80PVC 401/2 · 12S10 T304L SS BWCPVC 80CS SCH 101/2 · 12S40 T316L SS BWNAT PP 80PVC 801/2 · 2S40 T316L SS BWNAT PP 80PVC 801/2 · 2S40 T316L SS BWRED PVD F 80CPVC 801/2 · 2S40 T304L SS SWRED PVD F 80PVC 801/2 · 2S40 T304L SS SWNAT PVBPVC 801/2 · 2S40 T304L SS SWRED PVD F 80PVC 801/2 · 2S40 T304L SS SWS40 A53B CS BWPVC 801/2 · 8S10 T316L SS SWS40 A106B CS SWPVC 801/2 · 8S10 T316L SS SWS40 A106B CS SWPVC 801/2 · 8S10 T316L SS SWS40 A106B CS SWFRP1/2 · 12S40 T304L SS SWS40 A106B CS SWFRP1/2 · 2S40 T304L SS SWS40 A106B CS SWFRP1/2 · 2S10 T316L SS SWS40 A106B CS SWFRP1/2 · 2S10 T316L SS SWS40 A106B CS SWFRP1/2 · 2S10 T304L SS SWS40 A106B CS SWFRP1/2 · 8S10 T304L SS SW	CPVC 80	CPVC 80	1/2 - 8
CPVC 80CS SCH 101/2 · 12S40 T316L SS BWNAT PP 80PVC 801/2 · 2S40 T316L SS BWRED PVDF 80CPVC 801/2 · 2S40 T316L SS BWRED PVDF 80PVC 801/2 · 2S40 T304L SS SWRED PVDF 80PVC 801/2 · 2S40 T304L SS SWS40 A53B CS BWPVC 801/2 · 2S40 T304L SS SWS40 A106B CS BWPVC 801/2 · 8S10 T316L SS BWS40 A106B CS BWPVC 801/2 · 8S10 T316L SS BWS40 A106B CS BWPVC 801/2 · 12S40 T304L SS BWS40 A106B CS BWPVC 801/2 · 12S40 T304L SS BWS40 A106B CS BWFRP1/2 · 12S40 T304L SS BWS40 A106B CS BWFRP1/2 · 12S40 T304L SS BWS40 A106B CS SWFRP1/2 · 12S40 T304L SS BWS40 A106B CS BWFRP1/2 · 12S40 T304L SS BWS40 A106B CS SWFRP1/2 · 2S40 T304L SS BWS40 A53 BLK BSPVC 401/2 · 2S10 T316L SS BWS40 A53 BLK SWPVC 401/2 · 8S10 T316L SS BWS40 A53 BLK SWFRP1/2 · 2S10 T304L SS SWS40 A106B CS SWPVC 801/2 · 8S10 T316L SS SWS40 A106B CS SWPVC 801/2 · 8S10 T304L SS SWS40 A53 BLK SWPVC 801/2 · 8S10 T304L SS SWS40 A106B CS SWPVC 801/2 · 8S10 T304L SS SWS40 A106B CS SWPVC 801/2 · 8S10 T304L SS SWS40 A106B CS SWPVC 801/2 ·	CPVC 80	PVC 80	1/2 - 12
NAT PP 80         PVC 80         1/2 - 2         S40 T316L SS BW           NAT PP 80         PVC 40         1/2 - 2         S40 T316L SS BW           RED PVDF 80         CPVC 80         1/2 - 2         S40 T304L SS SW           RED PVDF 80         PVC 80         1/2 - 2         S40 T304L SS SW           NAT PVDF 80         PVC 80         1/2 - 2         S40 T304L SS SW           NAT PVDF 80         PVC 80         1/2 - 2         S40 T304L SS SW           S40 A53B CS BW         PVC 80         1/2 - 8         S10 T316L SS SW           S40 A106B CS SW         PVC 80         1/2 - 8         S10 T316L SS SW           S40 A106B CS SW         PVC 80         1/2 - 8         S10 T316L SS SW           S40 A106B CS SW         FRP         1/2 - 12         S40 T304L SS BW           S40 A106B CS SW         FRP         1/2 - 12         S40 T304L SS BW           S40 A106B CS SW         FRP         1/2 - 2         S40 T304L SS BW           S40 A106B SL SBW         FRP         1/2 - 2         S40 T304L SS BW           S40 A106B SL SBW         FRP         1/2 - 2         S40 T304L SS BW           S40 A106 SMLS BW         PVC 40         1/2 - 8         S10 T316L SS SW           S40 A53 BLK SW         FRP <t< td=""><td>CPVC 80</td><td>PVC 40</td><td>1/2 - 12</td></t<>	CPVC 80	PVC 40	1/2 - 12
NAT PP 80         PVC 40         1/2 - 2         S40 T316L SS BW           RED PVDF 80         CPVC 80         1/2 - 2         S40 T304L SS SW           RED PVDF 80         PVC 80         1/2 - 2         S40 T304L SS SW           NAT PVDF 80         PVC 80         1/2 - 2         S40 T304L SS SW           ENFUSION PP         PVC 80         1/2 - 2         S40 T304L SS SW           S40 A53B CS BW         PVC 80         1/2 - 8         S10 T316L SS SW           S40 A106B CS SW         PVC 80         1/2 - 8         S10 T316L SS SW           S40 A106B CS SW         PVC 80         1/2 - 12         S40 T304L SS SW           S40 A106B CS SW         PVC 80         1/2 - 8         S10 T316L SS SW           S40 A106B CS SW         FRP         1/2 - 12         S40 T304L SS BW           S40 A106B CS SW         FRP         1/2 - 12         S40 T304L SS SW           S40 A106B CS SW         FRP         1/2 - 2         S40 T304L SS BW           S40 A106B CS SW         FRP         1/2 - 2         S40 T304L SS BW           S40 A53 BLK BS         PVC 40         1/2 - 8         S10 T316L SS BW           S40 A53 BLK SW         FRP         1/2 - 2         S10 T316L SS SW           S40 A53 BLK SW         S40 A53 BLK	CPVC 80	CS SCH 10	1/2 - 12
RED PVDF 80         CPVC 80         1/2 - 2         S40 T304L SS SW           RED PVDF 80         PVC 80         1/2 - 2         S40 T304L SS SW           NAT PVDF 80         PVC 80         1/2 - 2         S40 T304L SS SW           ENFUSION PP         PVC 80         1/2 - 2         S40 T304L SS SW           S40 A53B CS BW         PVC 80         1/2 - 8         S10 T304L SS SW           S40 A106B CS BW         PVC 80         1/2 - 8         S10 T304L SS SW           S40 A106B CS BW         PVC 80         1/2 - 8         S10 T304L SS SW           S40 A106B CS BW         PVC 80         1/2 - 8         S10 T316L SS SW           S40 A106B CS SW         PVC 80         1/2 - 12         S40 T304L SS BW           S40 A106B CS SW         PVC 80         1/2 - 8         S10 T316L SS SW           S40 A106B CS SW         FRP         1/2 - 12         S40 T304L SS BW           S40 A106B CS SW         FRP         1/2 - 12         S40 T304L SS BW           S40 A106B CS SW         FRP         1/2 - 12         S40 T304L SS BW           S40 A106B CS SW         FRP         1/2 - 12         S40 T304L SS BW           S40 A106 SMLS BW         PVC 40         1/2 - 2         S40 T304L SS BW           S40 A53 BLK SW         S40	NAT PP 80	PVC 80	1/2 - 2
RED PVDF 80         PVC 80         1/2 - 2           NAT PVDF 80         PVC 80         1/2 - 2           ENFUSION PP         PVC DWV         1/2 - 6           S40 T304L SS SW         S40 T304L SS SW           S40 A53B CS BW         PVC 80         1/2 - 8           S40 A106B CS BW         PVC 80         1/2 - 8           S40 A106B CS SW         PVC 80         1/2 - 8           S40 A106B CS BW         PVC 80         1/2 - 12           S40 A106B CS BW         FRP         1/2 - 12           S40 A106B CS SW         FRP         1/2 - 12           S40 A106B CS SW         FRP         1/2 - 2           S40 A106B CS SW         FRP         1/2 - 12           S40 A106B CS SW         FRP         1/2 - 2           S40 A106B CS SW         FRP         1/2 - 2           S40 A106B CS SW         FRP         1/2 - 2           S40 A106 SMLS BW         PVC 40         1/2 - 8           S40 A53 BLK SW         PVC 80         1/2 - 2           S40 A53 BLK SW         S40 A53 BLK         1/2 - 2           S40 A106B CS SW         PVC 80         1/2 - 8           S40 A106B CS SW         PVC 80         1/2 - 8           S40 A106B CS SW         PVC 80	NAT PP 80	PVC 40	1/2 - 2
NAT PVDF 80         PVC 80         1/2 - 2         S40 T304L SS SW           ENFUSION PP         PVC DWV         1/2 - 6         S40 T304L SS SW           S40 A53B CS BW         PVC 80         1/2 - 8         S10 T316L SS SW           S40 A106B CS BW         PVC 80         1/2 - 8         S10 T316L SS SW           S40 A106B CS BW         PVC 80         1/2 - 8         S10 T316L SS SW           S40 A106B CS BW         PVC 80         1/2 - 12         S40 T304L SS BW           S40 A106B CS BW         PVC 80         1/2 - 12         S40 T304L SS BW           S40 A106B CS BW         FRP         1/2 - 12         S40 T304L SS BW           S40 A106B CS BW         FRP         1/2 - 12         S40 T304L SS BW           S40 A106B CS SW         FRP         1/2 - 2         S40 T304L SS BW           S40 A106B CS SW         FRP         1/2 - 2         S40 T304L SS BW           S40 A53 BLK SW         PVC 40         1/2 - 8         S10 T316L SS BW           S40 A53 BLK SW         PVC 40         1/2 - 8         S10 T316L SS BW           S40 A53 BLK SW         S40 A53 BLK         1/2 - 2         S10 T316L SS SW           S40 A53 BLK SW         S40 A53 BLK         1/2 - 2         S10 T304L SS SW           S40 A106B CS SW	RED PVDF 80	CPVC 80	1/2 - 2
ENFUSION PPPVC DWV1/2 - 6S40 T304L SS SWS40 A53B CS BWPVC 801/2 - 8S10 T316L SS SWS40 A106B CS BWPVC 801/2 - 8S10 T316L SS SWS40 A53B CS BWPVC 801/2 - 12S40 T304L SS BWS40 A106B CS BWFRP1/2 - 2S40 T304L SS BWS40 A53B THRDPVC 401/2 - 2S40 T304L SS BWS40 A53 BLK BSPVC 401/2 - 8S10 T316L SS BWS40 A53 BLK SWPVC 401/2 - 8S10 T316L SS BWS40 A53 BLK SWPVC 801/2 - 2S10 T316L SS SWS40 A53 BLK SWFRP1/2 - 2S10 T316L SS SWS40 A53 BLK SWFRP1/2 - 2S10 T316L SS SWS80 A53 BLK SWPVC 801/2 - 8S10 T316L SS SWS80 A53B CS BWPVC 801/2 - 8S10 T304L SS SWS40 A106 CS SWFRP1/2 - 2S10 T304L SS SWS80 A53B CS BWFRP1/2 - 2S10 T304L SS SWS80 A53B CS BWFRP1/2 - 12S40 T316L SS SWS80 A53B CS BWFRP1/2 - 2S40 T316L SS SWS80 A53B CS BWFRP1/2 - 2S40 T316L SS SWS80 A53B CS BWFRP1/2 - 12S40 T316L SS SWS80 A53B CS BWFRP1/2 - 12S40 T316L SS SWS80 A53B CS BWFRP1/2 - 2S40 T316	RED PVDF 80	PVC 80	1/2 - 2
S40 A53B CS BW       PVC 80       1/2 - 8       S10 T316L SS SW         S40 A106B CS BW       PVC 80       1/2 - 8       S10 T316L SS SW         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T316L SS SW         S40 A53B CS BW       FRP       1/2 - 12       S40 T304L SS BW         S40 A106B CS SW       FRP       1/2 - 12       S40 T304L SS BW         S40 A106B CS SW       FRP       1/2 - 2       S40 T304L SS BW         S40 A106B CS SW       FRP       1/2 - 2       S40 T304L SS BW         S40 A106B CS SW       FRP       1/2 - 2       S40 T304L SS BW         S40 A106B CS SW       FRP       1/2 - 2       S40 T304L SS BW         S40 A53B THRD       PVC 40       1/2 - 8       S10 T316L SS BW         S40 A53 BLK SW       PVC 40       1/2 - 8       S10 T316L SS BW         S80 A53 BLK SW       PVC 80       1/2 - 2       S10 T316L SS BW         S40 A53 BLK SW       S40 A53 BLK       1/2 - 2       S10 T316L SS SW         S80 A53 BLK SW       S40 A53 BLK       1/2 - 2       S10 T304L SS SW         S80 A53 BLK SW       S40 A53 BLK       1/2 - 2       S10 T304L SS SW         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B	NAT PVDF 80	PVC 80	1/2 - 2
S40 A106B CS BWPVC 801/2 - 8S10 T316L SS SWS80 A106B CS SWPVC 801/2 - 12S40 T304L SS BWS40 A106B CS BWFRP1/2 - 12S40 T304L SS BWS40 A106B CS SWFRP1/2 - 2S40 T304L SS BWS80 A106B CS SWFRP1/2 - 2S40 T304L SS BWS40 A53B THRDPVC 401/2 - 2S40 T304L SS BWS40 A106 SMLS BWPVC 401/2 - 2S40 T304L SS BWS40 A53 BLK SWPVC 401/2 - 8S10 T316L SS BWS80 A53 BLK SWPVC 401/2 - 8S10 T316L SS BWS80 A53 BLK SWFRP1/2 - 2S10 T316L SS BWS40 A53 BLK SWFRP1/2 - 2S10 T304L SS SWS40 A106B CS SWPVC 801/2 - 8S10 T304L SS SWS80 A106B CS SWPVC 801/2 - 8S10 T304L SS SWS80 A106B CS SWPVC 801/2 - 8S10 T304L SS SWS80 A106B CS SWPVC 801/2 - 8S10 T304L SS SWS80 A106B CS SWFRP1/2 - 2S10 T304L SS SWS80 A106B CS SWFRP1/2 - 2S40 T316L SS SWS80 A106B CS SWFRP1/2 - 12S40 T316L SS SWS80 A106B CS BWFRP1/2 - 12S40 T316L SS SWS80 A106B CS BWFRP1/2 - 2S40 T316L SS SWS80 A106B CS BWFRP1/2 - 2S40 T316L SS SWS80 A106B CS BWFRP1/2 - 12S40 T316L SS SWS80 A106B CS BWFRP1/2 - 12S40 T316L SS SWS40 A53B THRDFRP1/2 - 2 <td>ENFUSION PP</td> <td>PVC DWV</td> <td>1/2 - 6</td>	ENFUSION PP	PVC DWV	1/2 - 6
S80 A106B CS SW       PVC 80       1/2 - 8       S10 T316L SS SW         S40 A53B CS BW       FRP       1/2 - 12       S40 T304L SS BW         S40 A106B CS SW       FRP       1/2 - 2       S40 T304L SS BW         S80 A106B CS SW       FRP       1/2 - 2       S40 T304L SS BW         S40 A53B THRD       PVC 40       1/2 - 2       S40 T304L SS BW         S40 A53B THRD       PVC 40       1/2 - 2       S40 T304L SS BW         S40 A53 BLK BS       PVC 40       1/2 - 2       S40 T304L SS BW         S40 A53 BLK SW       PVC 40       1/2 - 8       S10 T316L SS BW         S40 A53 BLK SW       PVC 40       1/2 - 8       S10 T316L SS BW         S80 A53 BLK SW       PVC 80       1/2 - 2       S10 T316L SS BW         S40 A53 BLK SW       S40 A53 BLK       1/2 - 2       S10 T304L SS SW         S40 A106 CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       FRP       1/2 - 8       S10 T304L SS SW         S80 A136 LS S SW	S40 A53B CS BW	PVC 80	1/2 - 8
S40 A53B CS BW       FRP       1/2 - 12       S40 T304L SS BW         S40 A106B CS BW       FRP       1/2 - 12       S40 T304L SS BW         S80 A106B CS SW       FRP       1/2 - 2       S40 T304L SS BW         S40 A53B THRD       PVC 40       1/2 - 2       S40 T304L SS BW         S40 A53B THRD       PVC 40       1/2 - 2       S40 T304L SS BW         S40 A53 BLK BS       PVC 40       1/2 - 2       S40 T304L SS BW         S40 A53 BLK SS       PVC 40       1/2 - 8       S10 T316L SS BW         S80 A53 BLK SW       PVC 80       1/2 - 2       S10 T316L SS BW         S40 A106B CS SW       FRP       1/2 - 2       S10 T304L SS SW         S80 A53 BLK SW       S40 A53 BLK       1/2 - 2       S10 T316L SS BW         S80 A53 BLK SW       S40 A53 BLK       1/2 - 2       S10 T304L SS SW         S40 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S40 A106 CS SW       FRP       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       FRP       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       FRP       1/2 - 12       S40 T316L SS SW         S80 A106B CS BW <td>S40 A106B CS BW</td> <td>PVC 80</td> <td>1/2 - 8</td>	S40 A106B CS BW	PVC 80	1/2 - 8
S40 A106B CS BW       FRP       1/2 - 12       S40 T304L SS BW         S80 A106B CS SW       FRP       1/2 - 2       S40 T304L SS BW         S40 A53B THRD       PVC 40       1/2 - 2       S40 T304L SS BW         S40 A106 SMLS BW       PVC 40       1/2 - 2       S40 T304L SS BW         S40 A106 SMLS BW       PVC 40       1/2 - 2       S40 T304L SS BW         S40 A53 BLK BS       PVC 40       1/2 - 8       S10 T316L SS BW         S40 A53 BLK SW       PVC 80       1/2 - 2       S10 T316L SS BW         S80 A53 BLK SW       FRP       1/2 - 2       S10 T304L SS SW         S40 A53 BLK SW       FRP       1/2 - 2       S10 T304L SS SW         S40 A53 BLK SW       FRP       1/2 - 2       S10 T304L SS SW         S40 A53 BLK SW       S40 A53 BLK       1/2 - 2       S10 T304L SS SW         S40 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       FRP       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       FRP       1/2 - 2       S40 T316L SS SW         S80 A106B CS BW       FRP       1/2 - 12       S40 T316L SS SW         S80 A106B CS BW	S80 A106B CS SW	PVC 80	1/2 - 8
S80 A106B CS SW       FRP       1/2 - 2       S40 T304L SS BW         S40 A53B THRD       PVC 40       1/2 - 2       S40 T304L SS BW         S40 A106 SMLS BW       PVC 40       1/2 - 8       S10 T316L SS BW         S40 A53 BLK BS       PVC 40       1/2 - 2       S10 T316L SS BW         S80 A53 BLK SW       PVC 80       1/2 - 2       S10 T316L SS BW         S80 A53 BLK SW       FRP       1/2 - 2       S10 T304L SS SW         S40 A53 BLK SW       FRP       1/2 - 2       S10 T304L SS SW         S40 A53 BLK SW       S40 A53 BLK       1/2 - 2       S10 T304L SS SW         S40 A53 BLK SW       S40 A53 BLK       1/2 - 8       S10 T304L SS SW         S40 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       FRP       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       FRP       1/2 - 2       S40 T316L SS SW         S80 A106B CS BW       FRP       1/2 - 12       S40 T316L SS SW         S80 A106B CS BW       FRP       1/2 - 2       S40 T316L SS SW         S80 A106B CS BW       FRP       1/2 - 2       S40 T316L SS SW         S80 A106B CS BW <td>S40 A53B CS BW</td> <td>FRP</td> <td>1/2 - 12</td>	S40 A53B CS BW	FRP	1/2 - 12
S40 A53B THRD       PVC 40       1/2 - 2       S40 T304L SS BW         S40 A106 SMLS BW       PVC 40       1/2 - 8       S10 T316L SS BW         S40 A53 BLK BS       PVC 40       1/2 - 8       S10 T316L SS BW         S80 A53 BLK SW       PVC 80       1/2 - 2       S10 T316L SS BW         S80 A53 BLK SW       FRP       1/2 - 2       S10 T304L SS SW         S40 A106B CS SW       FRP       1/2 - 2       S10 T304L SS SW         S40 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A53 BLK SW       S40 A53 BLK       1/2 - 2       S10 T304L SS SW         S40 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       FRP       1/2 - 2       S10 T304L SS SW         S80 A106B CS SW       FRP       1/2 - 2       S40 T316L SS SW         S80 A106B CS BW       FRP       1/2 - 12       S40 T316L SS SW         S80 A106B CS BW       FRP       1/2 - 2       S40 T316L SS SW         S80 A106B CS BW       FRP       1/2 - 2       S40 T316L SS SW         S80 A106B CS BW       FRP       1/2 - 2       S40 T316L SS SW         S40 A533 BLK CS	S40 A106B CS BW	FRP	1/2 - 12
S40 A106 SMLS BW       PVC 40       1/2 - 8       S10 T316L SS BW         S40 A53 BLK BS       PVC 40       1/2 - 8       S10 T316L SS BW         S80 A53 BLK SW       PVC 80       1/2 - 2       S10 T316L SS BW         S80 A53 BLK SW       FRP       1/2 - 2       S10 T304L SS SW         S40 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S40 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A53B CS BW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       FRP       1/2 - 2       S10 T304L SS SW         S80 A53B CS BW       FRP       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       FRP       1/2 - 2       S40 T316L SS SW         S80 A106B CS BW       FRP       1/2 - 12       S40 T316L SS SW         S80 A106B CS BW       FRP       1/2 - 2       S40 T316L SS SW         S40 A53B THRD       FRP       1/2 - 2       HARD COPPER         S40 A53 BLK CS       S40 A53 BLK CS       1/2 - 12       HARD COPPER	S80 A106B CS SW	FRP	1/2 - 2
S40 A53 BLK BS       PVC 40       1/2 - 8       S10 T316L SS BW         S80 A53 BLK SW       PVC 80       1/2 - 2       S10 T316L SS BW         S80 A53 BLK SW       FRP       1/2 - 2       S10 T304L SS SW         S40 A53 BLK SW       S40 A53 BLK       1/2 - 2       S10 T304L SS SW         S40 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A53B CS BW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S40 A106 CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW         S80 A106B CS SW       FRP       1/2 - 2       S40 T316L SS SW         S80 A53B CS BW       FRP       1/2 - 2       S40 T316L SS SW         S80 A106B CS SW       FRP       1/2 - 12       S40 T316L SS SW         S80 A106B CS BW       FRP       1/2 - 2       S40 T316L SS SW         S40 A53B THRD       FRP       1/2 - 2       S40 T316L SS SW         S40 A53 BLK CS       S40 A53 BLK CS       1/2 - 12       HARD COPPER	S40 A53B THRD	PVC 40	1/2 - 2
S80 A53 BLK SW       PVC 80       1/2 - 2       S10 T316L SS BW       FR         S80 A53 BLK SW       FRP       1/2 - 2       S10 T304L SS SW       P         S40 A53 BLK SW       S40 A53 BLK       1/2 - 2       S10 T304L SS SW       P         S40 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       P         S80 A53B CS BW       PVC 80       1/2 - 8       S10 T304L SS SW       P         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       P         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       P         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       P         S80 A106B CS SW       FRP       1/2 - 2       S40 T316L SS SW       P         S80 A106B CS SW       FRP       1/2 - 12       S40 T316L SS SW       P         S80 A106B CS BW       FRP       1/2 - 2       S40 T316L SS SW       P         S80 A106B CS BW       FRP       1/2 - 2       S40 T316L SS SW       P         S80 A106B CS BW       FRP       1/2 - 2       S40 T316L SS SW       P         S40 A53B THRD       FRP       1/2 - 2       HARD COPPER       P         S40 A53 BLK CS       S40 A53	S40 A106 SMLS BW	PVC 40	1/2 - 8
S80 A53 BLK SW       FRP       1/2 - 2       S10 T304L SS SW       P         S40 A53 BLK SW       S40 A53 BLK       1/2 - 2       S10 T304L SS SW       P         S40 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       P         S80 A53B CS BW       PVC 80       1/2 - 8       S10 T304L SS SW       C         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       F         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       F         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       F         S80 A106B CS SW       FRP       1/2 - 2       S40 T304L SS SW       F         S80 A53B CS BW       FRP       1/2 - 2       S40 T304L SS SW       F         S80 A53B CS BW       FRP       1/2 - 2       S40 T316L SS SW       F         S80 A106B CS BW       FRP       1/2 - 2       S40 T316L SS SW       F         S40 A53B THRD       FRP       1/2 - 2       S40 T316L SS SW       F         S40 A53 BLK CS       S40 A53 BLK CS       1/2 - 12       HARD COPPER       P         S40 A53 BLK CS       S40 A53 BLK CS       1/2 - 12       HARD COPPER       3	S40 A53 BLK BS	PVC 40	1/2 - 8
S40 A53 BLK SW       S40 A53 BLK       1/2 - 2       S10 T304L SS SW       PV         S40 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       CF         S80 A53B CS BW       PVC 80       1/2 - 8       S10 T304L SS SW       FF         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       FF         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       FF         S40 A106 CS SW       FRP       1/2 - 2       S40 T316L SS SW       PV         S80 A53B CS BW       FRP       1/2 - 12       S40 T316L SS SW       FF         S40 A53B THRD       FRP       1/2 - 2       S40 T316L SS SW       FF         S40 A53 BLK CS       S40 A53 BLK CS       1/2 - 12       HARD COPPER       PV	S80 A53 BLK SW	PVC 80	1/2 - 2
S40 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       CPV         S80 A53B CS BW       PVC 80       1/2 - 8       S10 T304L SS SW       FRF         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       FRF         S40 A106 CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       S10         S40 A106 CS SW       FRP       1/2 - 2       S40 T316L SS SW       PVC         S80 A53B CS BW       FRP       1/2 - 12       S40 T316L SS SW       CPV         S80 A106B CS BW       FRP       1/2 - 2       S40 T316L SS SW       FRF         S40 A53B THRD       FRP       1/2 - 2       S40 T316L SS SW       FRF         S40 A53 BLK CS       S40 A53 BLK CS       1/2 - 12       HARD COPPER       PVC	S80 A53 BLK SW	FRP	1/2 - 2
S80 A53B CS BW       PVC 80       1/2 - 8       S10 T304L SS SW       FRP         S80 A106B CS SW       PVC 80       1/2 - 8       S10 T304L SS SW       S10         S40 A106 CS SW       FRP       1/2 - 2       S40 T316L SS SW       PVC         S80 A53B CS BW       FRP       1/2 - 12       S40 T316L SS SW       PVC         S80 A106B CS BW       FRP       1/2 - 2       S40 T316L SS SW       FRP         S80 A106B CS BW       FRP       1/2 - 2       S40 T316L SS SW       FRP         S40 A53B THRD       FRP       1/2 - 2       HARD COPPER       PVC         S40 A53 BLK CS       S40 A53 BLK CS       1/2 - 12       HARD COPPER       300	S40 A53 BLK SW	S40 A53 BLK	1/2 - 2
\$80 A106B C\$ SW       PVC 80       1/2 - 8       \$10 T304L \$\$ SW       \$10 T         \$40 A106 C\$ SW       FRP       1/2 - 2       \$40 T316L \$\$ SW       PVC 80         \$80 A53B C\$ BW       FRP       1/2 - 12       \$40 T316L \$\$ SW       PVC 80         \$80 A106B C\$ BW       FRP       1/2 - 2       \$40 T316L \$\$ SW       FRP         \$80 A53B THRD       FRP       1/2 - 2       \$40 T316L \$\$ SW       FRP         \$40 A53 BLK C\$       \$40 A53 BLK C\$       1/2 - 12       \$40 T316L \$\$ SW       FRP	S40 A106B CS SW	PVC 80	1/2 - 8
S40 A106 CS SWFRP1/2 - 2S40 T316L SS SWPVC 8S80 A53B CS BWFRP1/2 - 12S40 T316L SS SWCPVCS80 A106B CS BWFRP1/2 - 2S40 T316L SS SWFRPS40 A53B THRDFRP1/2 - 2HARD COPPERPVC 4S40 A53 BLK CSS40 A53 BLK CS1/2 - 12HARD COPPER3000	S80 A53B CS BW	PVC 80	1/2 - 8
\$40 A106 C\$ S\$W       FRP       1/2 - 2       \$40 T316L S\$ S\$W       PVC 8         \$80 A538 C\$ B\$W       FRP       1/2 - 12       \$40 T316L S\$ S\$W       CPVC 8         \$80 A106B C\$ B\$W       FRP       1/2 - 2       \$40 T316L S\$ S\$W       FRP         \$40 A53B THRD       FRP       1/2 - 2       \$40 T316L S\$ S\$W       FRP         \$40 A53B THRD       FRP       1/2 - 2       HARD COPPER       PVC 4         \$40 A53 BLK C\$       \$40 A53 BLK C\$       1/2 - 12       HARD COPPER       3000	S80 A106B CS SW	PVC 80	
S80 A53B CS BW         FRP         1/2 - 12         S40 T316L SS SW         CPVC           S80 A106B CS BW         FRP         1/2 - 2         S40 T316L SS SW         FRP           S40 A53B THRD         FRP         1/2 - 2         HARD COPPER         PVC 4           S40 A53 BLK CS         S40 A53 BLK CS         1/2 - 12         HARD COPPER         3000	S40 A106 CS SW	FRP	
S80 A106B CS BW     FRP     1/2 - 2     S40 T316L SS SW     FRP       S40 A53B THRD     FRP     1/2 - 2     HARD COPPER     PVC 4       S40 A53 BLK CS     S40 A53 BLK CS     1/2 - 12     HARD COPPER     3000	S80 A53B CS BW	FRP	1/2 - 12
S40 A53B THRD         FRP         1/2 - 2         HARD COPPER         PVC 4           S40 A53 BLK CS         S40 A53 BLK CS         1/2 - 12         HARD COPPER         3000	S80 A106B CS BW	FRP	
S40 A53 BLK CS         S40 A53 BLK CS         1/2 - 12         HARD COPPER         3000	S40 A53B THRD	FRP	
	S40 A53 BLK CS	S40 A53 BLK CS	
	S40 A53 BLK SW	PVC 40	1/2 - 2

For more than 30 years, IPEX has been supplying industrial, commercial, school and hospital laboratories throughout North America with high-quality, easy-to-install acid waste systems designed to handle a wide variety of chemicals and pH levels. Our comprehensive line of dedicated acid waste conveyance, neutralization and monitoring systems offers innovative features not available with any other system. In fact, IPEX Enfield<sup>™</sup> electrofusion and Labline<sup>®</sup> mechanical joint systems have long been recognized as the industry benchmark for performance and reliability, and are among the most widely specified systems in North America.

Also available through IPEX is the next generation, E-84 compliant Plenumline<sup>™</sup> system, made of flame retardant PVDF for extremely demanding applications such as return-air plenums. The complete range of IPEX integrated total solutions for acid waste applications also includes our Neutratank<sup>®</sup> neutralization tanks, Neutrasystem2<sup>™</sup> pH monitoring system, Floway<sup>™</sup> drains, and Encase<sup>™</sup> double containment systems.

# Acid Waste Piping Systems









Enfield Electrofusion Acid Waste Systems FRPP & NRPP	58
Labline Mechanical-Joint Acid Waste System FRPP	70
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Neutratank Neutralization Tanks HDPE & PP	82

## ENFIELD ELECTROFUSION ACID WASTE SYSTEMS

## **ENFIELD**"

Enfield electrofusion fittings are molded with an integral resistance wire in the socket, with jointing completed by energizing the resistance wire via a microprocessor controlled Enfusion Control Unit. The result of these innovations is an unparalleled level of joint reliability and repeatability. Enfield has proven over time that it produces the optimum level of performance where it matters most - at the joint interface. It offers unprecedented control of jointing - controlled fit, controlled temperature and controlled time.

## ADVANTAGES

- Positive reliable joints made in 2 minutes installation time is reduced
- 2 Several joints can be made at one time
- 3 Proven reliability for over a decade
- 4 Enfield is manufactured from polypropylene which has an operating temperature range from -10°F (-23°C) to 212°F (100°C).\* This allows systems to be flushed with boiling water
- 5 Heavy gauge resistance wire molded into sockets no loose components, controlled fusion of joints
- 6 **Easy connecting** heavy duty socket terminal posts complete with protection ears
- Microprocessor controlled Enfusion unit ensures secure joints and joint repeatability
- 8 **Matched system** high quality pipe and fittings are matched to give ease of installation and long term reliability
- (9) Easy to install even in difficult areas
- (10) Installed cost 50% less than glass
- (11) Breakage factor eliminated
- (12) Maintenance free

## STANDARDS



() ()

NSF-approved IAPMO-listed & CSA-certified Meets ASTM F1412, D4101 and CSA B181.3

## DID YOU KNOW?

SHITTEP

Enfield® offers polypro fittings, constructed with a heavy gauge resistance wire that is integrally molded into the socket. These are considered to be the premier fittings on the market.

## SHORT FORM SPECIFICATIONS

#### GENERAL

Acid waste drain and vent system, as shown on drawings, shall be NSF listed and CSA certified Schedule 40, polypropylene as manufactured by IPEX. System to include pipe supplied in 10 ft. lengths (or 20 ft lengths if NFRPP is specified), fittings, traps and neutralization tanks from the same manufacturer. It shall also include recommended adapters to connect to other piping materials, where applicable.

#### MATERIAL

Pipe shall be made from NSF listed Type 1, flame retardant polypropylene conforming to ASTM D4101, with a maximum average flame spread of zero seconds and a maximum extent of burning of 13 mm, in accordance with ASTM D635. Matched fittings shall be made from NSF listed flame retardant polypropylene with average maximum burn time of 80 seconds and maximum extent of burning of 20 mm in accordance with ASTM D635.

If NFRPP pipe is specified, it shall be made from NSF 14 listed and CSA certified Schedule 40 PP as manufactured by IPEX. Pipe shall comply with ASTM F1412 and material used shall comply with the material requirements of ASTM D4101.

#### FITTINGS

Fittings shall be NSF listed and have an integral heavy gauge, nickel/chrome electrical resistance wire molded in place in the fitting body. Copper wire elements, loose wire or other loose joint components, are prohibited. Fittings shall be Enfield or approved equal.

#### JOINTS

Connections between polypropylene pipe and fittings shall be made using the Enfield joint. All joints shall have a fusion cycle controlled by a microprocessor operated, waterproof, Enfusion control unit equipped with input and output voltage sensors, ambient temperature sensors to automatically adjust fusion time and audible alarms to indicate cycle interruptions and completion of the joining process. The unit shall be capable of fusing multiple joints and with a minimum capability of eight 2" joints with the same fusion time as a single joint.

Connections between polypropylene and other piping materials shall be made using Enfield adapters according to manufacturer's (IPEX) recommendations. All electrofusion machines shall be third party certified by UL and CSA.

#### INSTALLATION AND TESTING

Installation and testing shall be in accordance with the contract drawings, the manufacturer's recommendations and the local plumbing codes. Testing with compressed air is prohibited. The entire system shall be installed free of stress and in proper alignment. Horizontal supports shall provide a wide bearing area and be free of burrs or sharp edges. Support spacings shall be in accordance with the manufacturer's recommendations and local plumbing codes. Vertical piping shall have riser clamps at each floor. Pipe supports should be installed so that horizontal piping is in uniform alignment and with a uniform slope of at least 1/8".



	Dimension inches	Product Code
AW Polypropylen	<b>e Pipe</b> Flame Retard	ant Sch 40
	1-1/2	146001
$\bigcirc$	2	146002
	3	146003
	4	146004
	6	146006
	8	146008
	10	146010
	12	146012
	10' Lengths	

### Dimension Product inches Code

## AW Polypropylene Pipe Flame Retardant Sch 40

	1-1/2	146031
	2	146032
( ))	3	146033
	4	146034
	6	146036
	8	146038
	10	146040
	12	146042

20' Lengths

Note: 20' Schedule 40 FR pipe is a non-stock item available upon special order.

## AW Polypropylene Pipe Flame Retardant Sch 80

	1-1/2	146013
$\frown$	2	146014
	3	146015
	4	146016

10' Lengths

Note: 20' Schedule 80 FR pipe is a non-stock item available upon special order.

### AW Polypropylene Pipe Flame Retardant Sch 80

1-1/2	146022
2	146023
3	146024
4	146025

20' Lengths Note: 20' Schedule 80 FR pipe is a non-stock item available upon special order.

# AW Polypropylene PipeBlack Non-Flame Retardant Sch 401-1/214610121461023146103

4

6

8

10

12

20' Lengths

#### AW Polypropylene Pipe Black Non-Flame Retardant Sch 80

1-1/2	146201
2	146202
3	146203
4	146204
6	146206
8	146208
10	146210
12	146211

20' Lengths

146104

146106

146108

146110

inches Code
-------------

## Black Non-Flame Retardant Enfield Coupling

	2	257147
	3	257150
	4	257154
	6	257158
	8	257161
	10	257143
	12	257145

Dimension	Dueduet
DIIICIISIUII	Product
to a base	Code
inches	ooue

## 90° Sweep Soc

	1-1/2	257171
	2	257172
	3	257173
	4	257174
	6	257175

## Coupling Soc

	1-1/2	257141
	2	257146
	3	257149
	4	257153
	6	257157
	8	257160
	10	257142
	12	257144

## 90° Sweep Soc x Sp

## Fabricated Repair Coupling Soc

antion topa.		
	2	257148
	3	257152
	4	257156
	6	257159
	8	257295

## 1/8 Bend Soc

	1-1/2	257191
	2	257194
	3	257195
	4	257196
	6	257197

## 1/8 Bend Soc x Sp

	1-1/2	257221
	2	257222
	3	257223
	4	257224
	6	257225

## Fabricated 1/8 Bend Soc

<u> </u>	8	257198
	10	257192
	12	257193

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ENFIELD ELECTROFUSION ACID WASTE SYSTEMS

	Dimension inches	Product Code		Dimension inches	Product Code
<b>1/4 Bend (90°)</b> So	с		Fabricated Sa	nitary Tee Soc	
	1-1/2	257181		6	257214
	2	257184		8	257217
Ē				10	257202
) IGA			E	12	257205
			m		
1/4 Bend (90°) So					
	1-1/2	257291			
	2	257293	Reducing Sani	tary Tee Soc	
			Reducing cum	2 x 1-1/2	257207
				3 x 1-1/2	257209
				3 x 2	257210
				4 x 2	257212
			(m)	*4 x 3	257213
1/4 Bend Soc x Loo	ose Nut			* Fabricated	
	1-1/2	257292			
			Fabricated Red	<b>lucing Sanitary Tee</b> S	ос
				6 x 2	257215
Fabricated 1/4 Be	oo2 (° <b>02) hn</b>			6 x 4	257216
	8	257185	UUU	8 x 3	257163
	10	257182		8 x 4	257218
E.	12	257183		8 x 6	257219
				10 x 3	257164
				10 x 4	257203
				10 x 6	257204
				10 x 8	257165
				12 x 4	257166
				12 x 6	257167
Sanitary Tee Soc				12 x 8	257168
	1-1/2	257201		12 x 10	257169
	2	257206			
	3	257208			
	4	257211			
			Double Sanita		
			<u> </u>	*1-1/2	257351
				2	257352
				3	257354
				4	257357
			m	* Fabricated	

	Dimension inches	Product Code	I I	Dimension inches	Produc Code
Reducing Double	Sanitary Tee Soc		Fabricated Reduc	ing Wye Soc	
	2 x 1-1/2	257353	0.01	8 x 2	257427
	3 x 1-1/2	257355		8 x 3	257415
	4 x 2	257358		8 x 4	257416
	4 x 3	257359		8 x 6	257421
(nn)				10 x 3	257428
			<u>na</u>	10 x 4	257373
				10 x 6	257379
				10 x 8	257380
				12 x 3	257429
45° Wye Soc				12 x 4	257383
	1-1/2	257371		12 x 6	257387
	2	257390		12 x 8	257388
	3	257394		12 x 10	257430
	4	257400			
	6	257406			

			Combination Wye	<b>&amp; 1/8 Bend</b> (Long	g Turn Wye) Soc
			E	1-1/2	257389
Fabricated 45° W	l <b>ye</b> Soc			2	257392
	8	257414		3	257397
	10	257372		4	257403
	12	257381		6	257410

	•	
	2 x 1-1/2	257391
	3 x 1-1/2	257395
	3 x 2	257396
	4 x 1-1/2	257425
m	4 x 2	257401
	4 x 3	257402
	6 x 1-1/2	257426
	6 x 2	257407
	6 x 3	257408
	6 x 4	257409

Fabricated Comb	ination Wye & 1/8 I	Bend Soc
	8	257417
	10	257374
	12	257384

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	Dimension inches	Product Code	I	Dimension inches	Product Code
Reducing Combin	ation Wye & 1/8 B	end Soc	Reducing Double	45° Wye Soc	
	2 x 1-1/2	257393		*2 x 1-1/2	257446
	3 x 1-1/2	257398		6 x 4	257458
	3 x 2	257399		* Fabricated	
	4 x 1-1/2	257431		lashoutou	
	4 x 2	257404			
	4 x 3	257405			
101	6 x 1-1/2	257432			
	6 x 2	257411			
	6 x 3	257412			
	6 x 4	257413	Fabricated Reduc	ing Double 45° Wy	e Soc
				3 x 2	257449
				4 x 2	257453
				4 x 3	257454
				8 x 6	257461
Eshricsted Peduc	ing Combination W	va 8. 1/8 Rand Soc		10 x 4	257443
	8 x 4	257419		10 x 6	257463
	8 x 6	257420		10 x 8	257444
	10 x 3	257375		12 x 4	257464
	10 x 3	257375		12 x 6	257465
	10 x 4 10 x 6	257376		12 x 8	257466
	10 x 8	257378		12 x 10	257467
	10 x 8 12 x 3	257433			
	12 x 3 12 x 4	257433			
	12 × 4	20/404			

Fabricated Double Combination W	Nye &	1/8 Bend Soc
---------------------------------	-------	--------------

	2	257447
	3	257450
	4	257455
	6	257459
m		

Fabricated Double 45° Wye Soc						
	2	257445				
	3	257448				
	4	257452				
	6	257457				
	8	257460				
	10	257442				
	12	257462				

12 x 6

12 x 8

12 x 10

## Fabricated Reducing Double Combination Wye & 1/8 Bend Soc



64

257435

257386

	Dimension inches	Product Code	I I	Dimension inches	Product Code
True Wye Soc			Fabricated Cleand	out Tee Sp	
	1-1/2	257341		1-1/2	257551
THE CONTRACT OF THE CONTRACT.	2	257342		2	257552
				3	257553
				4	257554
<u>III</u>				6	257555

# Reducing True Wye Soc Molded Cleanout Tee Sp 2 x 1-1/2 257343 3 x 2 257344

#### Cleanout Sp

	1-1/2	257232
	2	257235
	3	257238
	4	257241
	*6	257244
	*Fabricated	

#### Fabricated Cap Soc

and a sup a		
	1-1/2	257541
	2	257543
	3	257544
	4	257545
	6	257546
	8	257547
	10	257542
	12	257548

Cleanout Plug Male Thread		Flange - ASA 150	Soc		
	1-1/2	257233		1-1/2	257361
	2	257236		2	257365
	3	257239		3	257366
	4	257242		4	257367
				6	257368

Cleanout w/ Brass Plug Sp			Fabricated Flange - ASA 150 Soc		
	1-1/2	257246		8	257369
	2	257231		10	257362
	3	257247		12	257363
	4	257248			

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257176

IPEX components are dimensionally matched; do not install system of mixed brands without our expressed written consent.

	Dimension inches	Product Code
Blind Flange - AS	A 150	
	1-1/2	231453
	2	231454
	3	231455
	4	231456
	6	231457
	8	231458
	10	231451
	12	231452

	Dimension inches	Product Code
Adapter Female T	hread x Loose Nut	
	1-1/2	257101

#### Adapter Soc x Loose Nut

	1-1/2	257111			
_					

Fabricated Blind Flange - ASA 150			
	8	257370	
	10	257360	
	12	257364	

#### Male Adapter Soc x Male Thread



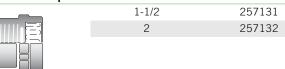
1-1/2	257121
2	257122

#### Reducing Bushing Soc x Sp

uonig Dusining	B OOC Y OD	
	2 x 1-1/2	257472
	** 3 x 1-1/2	257473
<u>(</u> <u></u> ,	3 x 2	257476
	** 4 x 1-1/2	257474
	4 x 2	257477
	4 x 3	257479
	6 x 1-1/2	257475
	6 x 2	257478
	6 x 3	257480
	6 x 4	257483
	8 x 3	257481
	8 x 4	257484
	8 x 6	257486
	10 x 4	257482
	10 x 6	257485
	10 x 8	257487
	12 x 4	257489
	12 x 6	257490
	12 x 8	257488
	12 x 10	257471

\*\* Discontinued when stock is depleted

#### Female Adapter Soc x Female Thread



#### Glass Adapter Soc x Bead

1-1/2	257501
2	257502
3	257503
4	257504

#### Cast Iron Adapter Soc x MJ Sp

 1-1/2	257511
2	257512
3	257513
4	257514

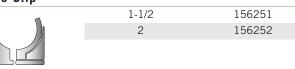
	Dimension inches	Product Code		Dimension inches	Product Code
3"/12" FRPP Tai	il Piece Adapter		P Trap - 3 piece S	oc	
	1-1/2 x 3	257133		3	257563
	1-1/2 x 12	257134	E	4	257564
	c/w Spig x Brass Comp	ression Ring		6	257565
			s	hipped as 3 pieces	

#### 1-1/2" x 12" FRPP Swivel Sink Strainer Adapter Sp x Female Thread Pipe Clip

257090



1-1/2 x 12 c/w Viton® Gasket



#### FRPP Swivel Sink Strainer Adapter Sp x Female Thread

	1-1/2	257093
	*1-1/2	156450
1	c/w Viton® Gasket *Pregrooved for Labline.	Nut and Olive are extra.

#### **Universal Trap** - Solid Base, P Type Soc x Female Thread

	, ,,	
(F)	1-1/2	257521
	1-1/2	257522

Р	Trap	-	2	piece	Soc



#### Universal Trap - Clear Base, P Type Soc x Female Thread



1-1/2 257531 1-1/2 257532

#### Universal Trap - Solid Base, S Type Soc

1-1/2 257523

Fabricated P Trap - 2 piece Soc

	8	257566
	10	257562
TA	Shipped as 2 pieces	



Universal Trap - Clear Base, S Type Soc 1-1/2



IPEX components are dimensionally matched; do not install system of mixed brands without our expressed written consent.

	Dimension inches	Product Code	Description	Product Code
compensator Joi	nt		Connector Cable - NEW Style Mach	ine
	3	257107	-	257278
	4	257108		
	6	257109		
Enfusion Contro	<b>I Unit</b> - Complete Kit		Connector Cable - Old Style Machir	пе
	-	257279		257263
	Kit includes hub clamps, connector cable & 5' link	1 1/2" thru 6", cable.		
xtension Pins			Connector Cable - EZ Connector Ca	ble
	-	257778	-	257294
	Priced per extension pin.			
infusion Hub Cla	amp - New T Bar Hai	ndle & Bushing	Link Cable c/w EZ Connector	
nfusion Hub Cla	amp - New T Bar Han 1-1/2 2	257254	2 ft. EZ	257268
nfusion Hub Cla	1-1/2 2	257254 257256	2 ft. EZ 5 ft. EZ	257269
nfusion Hub Cla	1-1/2 2 3	257254 257256 257257	2 ft. EZ 5 ft. EZ 10 ft. EZ	257269 257270
nfusion Hub Cla	1-1/2 2 3 4	257254 257256 257257 257257 257258	2 ft. EZ 5 ft. EZ	257269
nfusion Hub Cla	1-1/2 2 3 4 6	257254 257256 257257 257258 257259	2 ft. EZ 5 ft. EZ 10 ft. EZ	257269 257270
nfusion Hub Cla	1-1/2 2 3 4 6 8	257254 257256 257257 257258 257259 257260	2 ft. EZ 5 ft. EZ 10 ft. EZ	257269 257270
Infusion Hub Cla	1-1/2 2 3 4 6	257254 257256 257257 257258 257259	2 ft. EZ 5 ft. EZ 10 ft. EZ	257269 257270
infusion Hub Cla	1-1/2 2 3 4 6 8 10	257254 257256 257257 257258 257259 257260 257255	2 ft. EZ 5 ft. EZ 10 ft. EZ	257269 257270
nfusion Hub Cla	1-1/2 2 3 4 6 8 10	257254 257256 257257 257258 257259 257260 257255	2 ft. EZ 5 ft. EZ 10 ft. EZ 15 ft. EZ	257269 257270
	1-1/2 2 3 4 6 8 10 12	257254 257256 257257 257258 257259 257260 257255 257262	2 ft. EZ 5 ft. EZ 10 ft. EZ 15 ft. EZ Link Cable c/w Link Lead 5 ft. 10 ft.	257269 257270 257271
	1-1/2 2 3 4 6 8 10	257254 257256 257257 257258 257259 257260 257255 257262	2 ft. EZ 5 ft. EZ 10 ft. EZ 15 ft. EZ Link Cable c/w Link Lead 5 ft.	257269 257270 257271 25725
	1-1/2 2 3 4 6 8 10 12 <b>T Handle</b> for Hub Cla	257254 257256 257257 257258 257259 257260 257255 257262	2 ft. EZ 5 ft. EZ 10 ft. EZ 15 ft. EZ Link Cable c/w Link Lead 5 ft. 10 ft.	257269 257270 257271 257265 257265
D-Con-	1-1/2 2 3 4 6 8 10 12 <b>T Handle</b> for Hub Cla	257254 257256 257257 257258 257259 257260 257255 257262	2 ft. EZ 5 ft. EZ 10 ft. EZ 15 ft. EZ 15 ft. EZ Link Cable c/w Link Lead 5 ft. 10 ft. 15 ft. Fuses	257269 257270 257271 257265 257265 257266 257267
- Contraction of the second se	1-1/2 2 3 4 6 8 10 12 <b>T Handle</b> for Hub Cla	257254 257256 257257 257258 257259 257260 257255 257262	2 ft. EZ 5 ft. EZ 10 ft. EZ 15 ft. EZ 15 ft. EZ 5 ft. 10 ft. 15 ft. 15 ft. 15 ft.	257269 257270 257271 257265 257265 257266 257267 257267
Stainless Steel	1-1/2 2 3 4 6 8 10 12 <b>T Handle</b> for Hub Cla 1-1/2 to 12	257254 257256 257257 257258 257259 257260 257255 257262 mps 257262	2 ft. EZ 5 ft. EZ 10 ft. EZ 15 ft. EZ 15 ft. EZ 5 ft. 10 ft. 15 ft. 15 ft. 15 ft. 15 ft. 15 ft. 15 ft.	257269 257270 257271 257265 257265 257266 257267 257267
Stainless Steel	1-1/2 2 3 4 6 8 10 12 <b>T Handle</b> for Hub Cla	257254 257256 257257 257258 257259 257260 257255 257262 mps 257262	2 ft. EZ 5 ft. EZ 10 ft. EZ 15 ft. EZ 15 ft. EZ 5 ft. 10 ft. 15 ft. 15 ft. 15 ft.	257269 257270 257271 257265 257265 257266 257267 257267



# At IPEX you get more than products. You get our knowledge.

You get more than just purity with Enpure<sup>™</sup>. You get peace of mind. Enpure is one of the most complete and

dependable pure-water thermoplastic piping systems available today. From the manufacturing of cosmetics to solutions for medical use, from purewater lab applications to dialysis machines, Enpure is designed to meet all challenges. Manufactured with FDA approved materials, Enpure natural polypropylene pipe, valves and fittings eliminate the potential of contamination to your pure process.

And, unlike conventional systems, Enpure is designed as a socket fusion system. No hazardous chemicals are used for joining. Connections are as "clean" as any other components in the system. For more than 20 years IPEX has provided laboratories throughout North America with complete acid waste systems designed to take a variety of chemicals. Pour it, flush it or dump it – from school labs to industrial labs, Labline™ polypro, and Plenumline™ FR-PVDF acid waste systems are built to handle it.

> Since their introduction, Labline and Plenumline mechanical joints have revolutionized the industry – and they continue to be regarded as state-of-the-art. Labline and Plenumline also feature a new no-heat Elastolive for quicker installation and higher performance.

Backed by IPEX's 50 years of experience, Enpure, Labline and Plenumline are built to our strict quality, performance and dimensional standards.

# LABLINE MECHANICAL JOINT ACID WASTE SYSTEMS

# LABLINE

Labline (Mechanical Joint) has displaced the more expensive and difficult to install glass and metal systems. Gone is the need for fusing, caulking or welding of joints. Joining of the Labline System is complete in just 30 seconds and once the nut is locked into place, the end-user is assured of many years of trouble-free service. Yet, because it is a mechanical joint, the system can be easily dismantled and re-used, making it ideal for modular designs and for systems that may require re-modeling in the future.

**STANDARDS** 



働 **(**\$P)•

**NSF-approved** IAPMO-listed & CSA-certified Meets ASTM F1412, D4101 and CSA B181.3

#### **ADVANTAGES**

- 30 second jointing save on installation time
- Proven reliability for over 30 years
- Labline is manufactured from polypropylene which has an operating temperature range from -10°F (-23°C) to 212°F (100°C).\* This allows systems to be flushed with boiling water
- All plastic construction no galvanic action, electrolysis or (4) corrosion in the joint
  - Simple, inexpensive, non-temperamental tools
  - Easy to install, even in difficult areas
  - Mastered by plumbers in minutes. No pre-heating required to install olive
- (8)System changes during installation can be done without spoiling fittings
- (9) Can be disassembled and re-used
- (10)Ideal for modular systems
  - Ideal for remodeling
- (12) Matched system - high quality pipe and fittings are matched to give ease of installation and long term reliability





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**DID YOU KNOW?** Both Labline<sup>®</sup> and Plenumline<sup>™</sup> contain no-heat Elastolives<sup>™</sup> for quick installation and high performance.

#### SHORT FORM SPECIFICATIONS

#### GENERAL

Acid waste drain and vent system, as shown on drawings, shall be NSF listed, Schedule 40, polypropylene as manufactured by IPEX to include pipe supplied in 10 ft. lengths (or 20 ft lengths if NFRPP is specified), and matched fittings, traps and neutralization tanks from the same manufacturer. It shall also include recommended adapters to connect to other piping materials, where applicable.

#### MATERIAL

Pipe shall be made from NSF listed Type 1, flame retardant polypropylene conforming to ASTM D4101, with a maximum average flame spread of zero seconds and a maximum extent of burning of 13 mm, in accordance with ASTM D635. Matched fittings shall be made from NSF listed flame retardant polypropylene with average maximum burn time of 80 seconds and maximum extent of burning of 20 mm in accordance with ASTM D635. If NFRPP pipe is specified, it shall be made from NSF 14 listed and CSA certified Schedule 40 PP as manufactured by IPEX. Pipe shall comply with ASTM F1412 and material used shall comply with the material requirements of ASTM D4101.

#### FITTINGS

Fittings shall be NSF listed, be of all plastic construction and be designed to lock into a machined groove on the mating piping. All fittings shall have integrally molded union connections. No metallic grab rings or clamps shall be allowed. Fittings containing EVA (ethylene vinyl acetate) are strictly prohibited. Couplings shall not be added to make mechanical joint fittings. Fittings shall be Labline or approved equivalent.

#### JOINTS

Connections between polypropylene pipe and matched fittings shall be made using the Labline Joint.

#### INSTALLATION AND TESTING

Installation and testing shall be in accordance with the contract drawings, the manufacturer's recommendations and the local plumbing codes. Testing with compressed air is prohibited. The entire system shall be installed free of stress and in proper alignment. Horizontal supports shall provide a wide bearing area and be free of burrs or sharp edges. Support spacings shall be in accordance with the manufacturer's recommendations and local plumbing codes. Vertical piping shall have riser clamps at each floor. Pipe supports shall be installed so that horizontal piping is in uniform alignment and with a uniform slope of at least 1/8" per foot, or in accordance with the local plumbing codes.

	Dimension inches	Product Code	I I	Dimension inches	Product Code
Coupling			Reducing Sanitary	/ Tee	
	1-1/2	156161		2 x 1-1/2	156204
	2	156162		3 x 1-1/2	156207
	3	156163		3 x 2	156208
	4	156164		4 x 1-1/2	156211
				4 x 2	156212
				4 x 3	156213

#### 1/8 Bend (45°)

1-1/2	156191
2	156192
3	156193
4	156194

#### Loose Nut 1/8 Bend (45°) MJ x Loose Nut

1-1/2	156216
2	156217
3	156218
4	156219

#### 1/4 Bend (90°)

	1-1/2	156181
	2	156182
	3	156183
	4	156184

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Loose Nut 1/4 Bend MJ x Loose Nut			
_	1-1/2	156291	
	2	156292	
	3	156293	
	4	156294	
الكال			

#### Sanitary Tee

	1-1/2	156201
	2	156203
	3	156206
	4	156210

Cleanout Tee		
	1-1/2	156202
	2	156205
	3	156209
	4	156214

#### 45° Wye

	1-1/2	156361
	2	156363
	3	156367
	4	156373

#### Reducing 45° Wye

	2 x 1-1/2	156364
	3 x 1-1/2	156368
	3 x 2	156369
WK V	4 x 1-1/2	156374
	4 x 2	156375
	4 x 3	156376

#### Combination Wye & 1/8 Bend

1-1/2	156362
2	156365
3	156370
4	156377

### All Labline fittings are furnished assembled with Olives and Union Nuts. IPEX components are dimensionally matched; do not install system of mixed brands without our expressed written consent.

Dimension	Product	Dimension	Product
inches	Code	inches	Code
Reducing Combination Wve & 1/8	Rond	Reducing Counting Looso Nut x ML	

#### Reducing Combination Wye & 1/8 Bend

<b>.</b>	2 x 1-1/2	156366
	3 x 1-1/2	156371
	3 x 2	156372
	4 x 1-1/2	156380
	4 x 2	156378
	4 x 3	156379
	4 x 3	156379

#### **Reducing Coupling** Loose Nut x MJ

2 x 1-1/2	156397
3 x 1-1/2	156398*
3 x 2	156400*
4 x 1-1/2	156399*
4 x 2	156401*
4 x 3	156402
* Looso put pot furnished	

Loose nut not furnished

#### **Double Wye**

1-1/2	156381
2	156383
3	156387
4	156392

#### Threaded Adapter Male Thread x Female Thread

1-1/2 x 1-1/4	156121
1-1/2 x 1-1/2	156131

#### Male Adapter MJ x Male Thread

	1-1/2	156141
	2	156142
	3	156143
	4	156144

#### **Reducing Double Wye**

	2 x 1-1/2	156384
	3 x 1-1/2	156388
	3 x 2	156389
	4 x 1-1/2	156405
	4 x 2	156393
	4 x 3	156394

#### Female Adapter MJ x Female Thread

1-1/2
2

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156151

156152

# LABLINE MECHANICAL JOINT

#### Double Wye & 1/8 Bend 1-1/2

	2	156385
	3	156390
	4	156395

156382

#### Glass Adapter MJ x Bead

1-1/2	156451
2	156452
3	156453
4	156454

#### Reducing Double Wye & 1/8 Bend

	2 x 1-1/2	156386
	3 x 1-1/2	156406
	3 x 2	156391
	4 x 1-1/2	156407
	4 x 2	156396
	4 x 3	156408

Duriron Adapter MJ x Spigot				
	1-1/2	156461		
	2	156462		
	3	156463		
	4	156464		

All Labline fittings are furnished assembled with Olives and Union Nuts. IPEX components are dimensionally matched; do not install system of mixed brands without our expressed written consent

	Dimension inches	Product Code		Dimension inches	Prod Coc
Cleanout Plug			Universal Trap F	emale Thread x MJ	
	1-1/2	156241		1-1/2	156
	2	156242		1-1/2	156
	3	156243		Transparent Base	
	4	156244		-	156
				PP Base Only	
				-	156
				Clear Base Only	
				-	156
lant Loon II Dand				O-ring Gasket Only	100
ent Loop U Bend	1-1/2	156101		-	156
	2	156101		Top Assembly For W50	
			Ilniversal Tree	<b>S-Type</b> Female Thread	V M I
-			υπινειδαι παμ,	1-1/2	X IVIJ 156
Trap - 2 Piece			۹ 🗩	*1-1/2	156
	1-1/2 2	156103 156104		* Transparent Base	100
Trap - 3 piece Lo		156711	Sink Outlet w/ P	lug	
	1-1/2	156711		1-1/2 - 3-3/8	156
	2	156712		1-1/2 - 3-3/8	156
R./D	3	156713		1-1/2 - 2-7/8	156
	4	156714		1-1/2 - 2-7/8	156
. <b>.</b>				-	156
<b>S Trap</b> - 3 Piece	1-1/2	156105	Cink Autor Dive		
	2	156106	Sink Outlet Plug		150
	2	100100		-	156
9 -				-	156
Running Trap - 3			Sink Overflow		
	1-1/2	156107		1-1/2	156
	2	156108		1-1/2	156

LABLINE MECHANICAL JOINT

	Dimension inches	Product Code		Dimension inches	Product Code
Cup Sink Round			No Heat Elastoliv	<b>e</b> Yellow	
	6 x 4 Deep	156403		1-1/2	156222
	4 x 4 Deep	156404		2	156113
	-	156409		3	156114
ří (				4	156115

#### Cup Sink Oval



6 x 3	156491
9 x 3	156493
-	156492

#### **Grooving Tool**

1-1/2	156109
2	156110
3	156111
4	156112

#### **Dilution Trap**

n Trap			Spanner		
-	1-1/2	156601	_	1-1/2	156264
e 🚟	*1-1/2	156611		2	156266
	* Transparent Base			3	156268
* Transparent Base			4	156270	
			V		

#### **Grooving Tool & Spanner Combination Set**

# **Pipe Clip**

1-1/2	156251
2	156252

#### 1-1/2 2 3

4

#### **Union Nut**

1-1/2	156231
2	156232
3	156233
4	156234

156263

156265

156267

156269

LABLINE MECHANICAL JOINT

# FLOWAY POLYPROPYLENE FLOOR DRAINS

# **FLOWAY**<sup>™</sup>

For efficiently managing chemical spills, our Floway<sup>™</sup> adjustable and non-adjustable polypropylene drain ports are specially designed to feed into IPEX acid waste systems.

#### **ADVANTAGES**

- 1) Rated for pedestrian traffic and available in sizes from 2" to 6".
- 2 Floway<sup>™</sup> drains can be optionally configured with adjustable strainers, round funnels, sediment baskets and plain end or threaded outlets.
- 3 Adjustable feature allows easy leveling after pouring of finished floors

#### **PRODUCT SELECTION CHART**

Dimension	Product
Inches	Code

#### F1000 Series Adjustable Floor Drain

	Enfield 2	237001
	Labline 2	237075
	3	237011
	4	237021
	6	237031

#### F1000 Series Adjustable Floor Drain

	Enfield 2	237003
	Labline 2	237077
	3	237013
	4	237023
	6	237034

w/ Sediment Basket and 6" Round Funnel

F1000 Series A	djustable Floor Drain	ı	F1000 Series Ad	justable Floor Draiı	1
	Enfield 2	237002		Enfield 2	237004
	Labline 2	237076		Labline 2	237078
	3	237012		3	237014
	4	237022		4	237024
	6	237033		6	237032
	w/ Sediment Basket			w/ 6" Round Funnel On	ly

S

	Dimension Inches	Product Code
F4000 Series No	on-Adjustable Floor	Drain
	Enfield 2	237041
	Labline 2	237079
	3	237051
	4	237061
	6	237071

Enfield 2

Labline 2

3

4

6

w/ Sediment Basket

237042

237080

237052

237062

237072

	Dimension Inches	Product Code
Gas Tight Plug		
	3	237815
	4	237816
	6	237817

#### Allenhead Vandalproof Screws

Set of 3 screws	237045

#### **Blank Cover for F Series Drains**

F1000 Series	237814
F4000 Series	237813

#### F4000 Series Non-Adjustable Floor Drain

F4000 Series Non-Adjustable Floor Drain

	Enfield 2	237044
	Labline 2	237081
	3	237053
	4	237063
	6	237073

w/ Sediment Basket & 6" Round Funnel

Round Funnel		
	6	237810

Sediment Basket	Strainer for F Serie	es Drains
	F1000 Series	237809
	F4000 Series	237808

#### F4000 Series Non-Adjustable Floor Drain

<u> </u>	Enfield 2	237043
	Labline 2	237082
	3	237054
	4	237064
	6	237074

w/ 6" Round Funnel Only

Grid Strainers fo	r F Series Drains	
	F1000 Series	237807
	F4000 Series	237806

			Male Iron Pipe	Threaded Outlet	
Floor Cleanout w	ith Brass Cover	(adjustable Cleanout) Sp		3	257091
	2	237173		4	257092
	3	237174			
	4	237175			
	6	237177			
			FPT Tap for Prin	ning Drain Assembly	
				3/8	237430
				1/2	237429

# PLENUMLINE MECHANICAL JOINT ACID WASTE SYSTEM

# **PLENUMLINE**

Plenumline mechanical joint acid waste systems easily displace costly and difficult-to-install glass and metal systems. With Plenumline, time-consuming methods associated with conventional heavy and brittle systems are replaced by a time proven mechanical joint that takes only 30 seconds to complete. Once the Plenumline nut is locked in place, the end-user is assured of many years of trouble-free service. In addition, mechanical joint systems can easily be dismantled and re-used, making Plenumline ideal for modular designs and future expansions.

#### STANDARDS



IAPMO-listed Meets ASTM F1673 Standard specification for Polyvinylidene Fluoride (PVDF) Corrosive Waste Drainage Systems.

SP.

#### ADVANTAGES

- ) Ideally suited to plenum applications
- 30-second joints shorten installation time
- Manufactured from Flame Retardant PVDF, which has an operating temperature range from -40°F (-40°C) to 285°F (140°C). With this high upper limit, Plenumline systems can be flushed with boiling water.

# 4 All-plastic construction eliminates galvanic action, electrolysis and corrosion in the joint.

- 5 **Easy to install**, even in tight areas, by using simple, inexpensive tools. Mechanical joints are mastered by plumbers in minutes; no pre-heating is required to install the new blue elastolive.
- 6 **Modularized design** means Plenumline components can be disassembled and re-used. In addition, system modifications during installation can be performed without damaging fittings.
  - **High-quality pipe and fittings** are matched to simplify installation and extend long-term reliability.
  - Flame Retardant PVDF material exhibits a flame spread index of 5 and smoke development index of 35 as tested in accordance with ASTM E84 and UL 723, and also meets 25/50 Flame/Smoke limits of ULC S102.2.



#### DID YOU KNOW?

IPEX Plenumline is a robust acid waste system, made from flame-retardant PVDF thermoplastic, designed for challenging conditions, including highly restrictive return air plenum applications and high-temperature corrosive chemical waste situations.



#### SHORT FORM SPECIFICATIONS

#### GENERAL

Acid waste drain and vent system, as shown on drawings, shall be IAPMO listed, Schedule 40, FR-PVDF as manufactured by IPEX to include pipe supplied in 10 ft. lengths and matched fittings, traps and neutralization tanks from the same manufacturer. It shall also include recommended adapters to connect to other piping materials, where applicable.

#### MATERIAL

Pipe and fittings shall be made from Kynar 740-02, flame retardant PVDF conforming to ASTM F 1673, with a limiting oxygen index (LOI) of 60, Resin must have a vertical burn rating of 94 V-0. Kynar 740-02 resin based on testing to ASTM E84 (UL 723) must have surface burning characteristics greater than or equal to a flame spread 5 and smoke development 35.

#### FITTINGS

Fittings shall be third party certified to ASTM F 1673 and ASTM E84, and IAPMO approved, be of all plastic construction and a tapered elastic retaining ring shall be designed to lock into a machined groove on the mating piping. All fittings shall have integrally molded union connections. No metallic grab rings or clamps shall be allowed. Fittings shall be Plenumline<sup>™</sup> or approved equal.

#### INSTALLATION AND TESTING

Installation and testing shall be in accordance with the contract drawings, the manufacturer's recommendations and the local plumbing codes. Testing with compressed air including air booster over water is prohibited. The entire system shall be installed free of stress and in proper alignment. Horizontal supports shall provide a wide bearing area and be free of burrs or sharp edges. Support spacings shall be in accordance with the manufacturer's recommendations and local plumbing codes. Vertical piping shall have riser clamps at each floor. Pipe supports shall be installed so that horizontal piping is in uniform alignment and with a uniform slope of at least 1/8" per foot, or in accordance with the local plumbing code requirements.

	Dimension Inches	Product Code		Dimension Inches	Product Code
Pipe	1.1/0	147045	Cleanout Tee	1.1/0	157061
$\frown$	1-1/2	147045	<b>R</b> in	1-1/2	157061
	2	147046	. ค.โ	2	157062
	3	147047		3	157063
	4	147048		4	157064
Coupling	1.1/0	157000	45° Wye		
	1-1/2	157006		1-1/2	157036
	2	157007		2	157037
	3	157008		3	157038
	4	157009		4	157039
/8 Bend			-		
	1-1/2	157014	Reducing 45° Wy		
	2	157015		2 x 1-1/2	157069
	3	157016		3 x 1/12	157073
	4	157017		3 x 2	157070
				4 x 2	157071
.oose Nut 1/8 Ben				4 x 3	157072
	1-1/2	157024			
	2	157025	Combination Wye	e & 1/8 Bend	
	3	157026		1-1/2	157074
	4	157027		2	157075
				3	157076
/4 Bend				4	157077
	1-1/2	157010			
	2	157011			
	3	157012	Reducing combin	ation Wye & 1/8 B	
	4	157013		2 x 1-1/2	157078
			L, X, F#	3 x 1/12	157079
oose Nut 1/4 Ben	<b>d</b> Loose Nut x MJ			3 x 2	157080
	1-1/2	157032		4 x 2	157081
	2	157033		4 x 3	157082
	3	157034			
	4	157035	Double 45° Wye	(Fabricated)	
				1-1/2	157049
Sanitary Tee				2	157050
··· <b>/</b> ···	1-1/2	157018		3	157051
	2	157019		4	157052
	3	157020			
	4	157021	Reducing Double	Wyo	
				2 x 1-1/2	157096
Reducing Sanitary	Тее			3 x 1/12	157104
	2 x 1-1/2	157022		3 x 2	157097
	3 x 1/12	157065		4 x 1-1/2	157091
	3 x 2	157023		4 x 2	157098
	4 x 2	157067		4 x 3	157099
	4 x 3	157068		+ x J	10/099

All fittings are furnished assembled with Olives and Union Nuts. IPEX components are dimensionally matched; do not install system of mixed brands without our expressed written consent.

Inches	Product Code		Inches	Product Code
Bend		Loose Nut - Redu	cing Coupling Loos	⊳ Nut x M I
1-1/2	157100		2 x 1-1/2	157040
			3 x 1/12	157041
3				157042
				157043
	10/100			157044
Male Thread				e not runnished.
1-1/2	157002	Flange (Fabricated		
2	157003			157057
				157058
				157059
x Female Thread			4	157060
1-1/2	157004			bsolete when stock
2	157005		depleted	
		Tail Piece Adapte	<b>er</b> Sp x Brass Compre	ssion Ring
			1-1/2 x 12	157105
1-1/2	157028	-		
		No Heat Flastoliv	A Rhuo	
				157066
4	157051			157106
				157107
1.1/0	157000			157108
2	157001			
		Union Nut		
			1-1/2	157109
1-1/2	157083		2	157110
2	157084		3	157111
			4	157112
		Crooving Tool 9	Snannar Camhinati	an Sat
	157005		-	156263
				156265
				156267
		' UA		156269
4	157088			100205
		Spanner		
1-1/2	157089			156264
				156266
2	207030			156268
		V	4	156270
		Grooving Tool		
1-1/2	157053		1-1/2	156109
2	157054		2	156110
3	157055		3	156111
	2 3 4 Male Thread 1-1/2 2 x Female Thread 1-1/2 2 1-1/2 2 3 4 1-1/2 2 3 1-1/2 2 3 1-1/2 2 3 1-1/2 2 3 1-1/2 2 3 1-1/2 2 3 1-1/2 2 3 1-1/2 2 3 1-1/2 2 3 1-1/2 2 3 1-1/2 2 3 1-1/2 2 3 1-1/2 2 3 1-1/2 2 1-1/2 2 1-1/2 2 1-1/2 2	2 157101 3 157102 4 157103 Male Thread 1-1/2 157002 2 157003 x Female Thread 1-1/2 157004 2 157004 2 157028 2 157029 3 157030 4 157031 1-1/2 157083 2 157084 1-1/2 157083 2 157084 3 piece 1-1/2 157085 2 157084 3 157087 4 157088	2       157101         3       157102         4       157103         Male Thread	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

All fittings are furnished assembled with Olives and Union Nuts. IPEX components are dimensionally matched; do not install system of mixed brands without our expressed written consent

# HDPE & POLYPROPYLENE NEUTRALIZATION TANKS

## **NEUTRATANK**°

IPEX offers a complete range of Neutratank<sup>®</sup> neutralization tanks as well as dilution, sampling and pH tanks for managing concentrations and pH levels in acid waste systems.

Neutratanks are made of high-density polyethylene or polypropylene material with a one-piece rotationally molded, seamless construction, a bolt-down flanged top and combination EZ Access cover. Neutratanks are available in sizes from 5 gallons to 2,000 gallons to suit most potential design conditions.

#### DID YOU KNOW?

Neutratank®s are used for limestone neutralization of chemical waste prior to discharge into the sewer.

#### ADVANTAGES.

- Cylindrical and rectangular limestone neutralization tanks from 5 to 2000 gallons are available.
- 2 A variety of lids, inlets, outlets and accessories are offered.
- (3) Dilution tanks are available in 1, 2 and 5-gallon sizes.



#### SHORT FORM SPECIFICATIONS

Contractor shall furnish and install HDPE (Polypropylene) Neutralization Tank. Tank shall be rotationally molded, seamless construction with flanged top and welded or bolt down cover, as supplied by IPEX. Tank shall be Neutratank No. CT0100, having 100-gallon capacity complete with 3" inlet and outlet, and 11/2" vent connection. Tank to be 32" diameter x 42" high. Tank shall be installed in accordance with manufacturer's recommendations.

Contractor shall furnish and fill the tank prior to installation with limestone chips, as supplied by IPEX, to a level just below the tank outlet. Water should be added to the tank prior to placement of the limestone chips.

	Gallons	Inlet/Outlet Inches	Product Code
HDPE EZ Plain E	Ind		
	5	1-1/2	237111
	5	2	237112
	15	2	237122
	15	3	237123
	30	2	237132
	30	3	237133
	30	4	237134
	55	3	237143
	55	4	237144
	100	3	237152
	100	4	237153
	150	3	237241
	150	4	237242
	200	3	237271
	200	4	237272
	275	3	237128
	275	4	237129
	*Obsolete wher	n stock is depleted	b
HDPE Standar	<b>d Domed</b> Pla	in End	
	5	1-1/2	237211
	-	0	007010



ard	Domed	Plain End		
	5	1-1/	2 2	237211
	5	2	4	237212
	15	2		237222
	15	3	4	237223
	30	2		237232
	30	3	4	237233
	30	4		237234
	55	3	4	237243
	55	4		237244
	100	3		237252
	100	4		237253
	150	3	4	237281
	150	4		237282
	200	3	4	237411
	200	4		237412
	275	3		237130
	275	4		237124
	360	3		237125
	360	4		237126
	360	6	4	237497
	500	3		237135
	500	4		237136
	500	6	2	237498

HDPE	Steel	Pedestrian	Plain	End
------	-------	------------	-------	-----

500

Pede	<b>strian</b> Plain	End	
	5	1-1/2	237501
	5	2	237502
	15	2	237503
	15	3	237504
	30	2	237505
	30	3	237506
	30	4	237507
	55	3	237508
	55	4	237509
	100	3	237510
	100	4	237511
	150	3	237512
	150	4	237513
	200	3	237514
	200	4	237515
	275	3	237516
	275	4	237517
	360	3	237518
	360	4	237519
	360	6	237520
	500	3	237521
	500	4	237522
	500	6	237526

6

237205

EZ Standard Domed & HD Flat covers are not suitable for pedestrian traffic. Always use steel pedestrian covers. Neutratanks are not rated for H2) live loading. In areas requiring H20 loading, position the tank below a Department of Transportation approved manhole cover. Regular tanks and 700 to 2000 gallon cylindrical tanks are available on request.

	Gallons	Inlet/Outlet Inches	Product Code		Gallons	Inlet/Outlet Inches	Product Code	
Polypro Standard Domed Plain End Polypro Steel Pedestrian Plain End								
	7	1-1/2	237059		7	1 1/2	237524	
5	7	2	237065	5	7	2	237525	
	15	2	237066		15	2	237526	
	15	3	237067		15	3	237527	
	30	2	237068		30	2	237528	
	30	3	237069		30	3	237529	
	30	4	237070		30	4	237530	
	55	3	237093		55	3	237531	
	55	4	237094		55	4	237532	
	100	3	237095		100	3	237533	
	100	4	237096		100	4	237534	
	150	3	237097		150	3	237535	
	150	4	237098		150	4	237536	
	200	3	237099		200	3	237537	
	200	4	237100		200	4	237538	
	275	3	237101		275	3	237539	
	275	4	237102		275	4	237540	
	360	3	237103		360	3	237541	
	360	4	237104		360	4	237542	
	360	6	237105		360	6	237543	
	500	3	237106		500	3	237544	
	500	4	237107		500	4	237545	
	500	6	237108		500	6	237546	

#### Polypro HD Bolted Flat Plain End

6
7
8
9
0
3
4
5
6
8
0
4
5
6
8
0
5
6
8
9
0
5
6
3

Inlet / Outlet	Tank Size

#### Inlet / Outlet Tank Sizes & Connection Options

1-1/2" Plain End, MPT, FPT, Flanged	5 gal to 55 gal
2" Plain End, MPT, FPT, Flanged	5 gal to 150 gal
3" Plain End, MPT, FPT, Flanged	15 gal to 500 gal
3" Flanged	30 gal to 500 gal
4" Plain End, MPT, FPT, Flanged	30 gal to 2000 gal
6" Flanged	360 gal to 2000 gal

EZ Standard Domed & HD Flat covers are not suitable for pedestrian traffic. Always use steel pedestrian covers. Neutratanks are not rated for H-20 Live Loading. In areas requiring H-20 loading, position the tank below a Department of Transportation approved manhole cover. Regular tanks and 700 to 2000 gallon cylindrical tanks are available on request.

Gallons	Ext Length	Product
Gallolis	Inches	Code

#### HDPE Non-Adjustable Extension

	5	6 to 9	237462
	15	6 to 14	237463
	30	6 to 24	237464
	55	6 to 31	237465
-	100	6 to 35	237466
7 F	150	6 to 43	237467
	200	6 to 43	237468
$\bigcirc$	275	6 to 42	237469
	360	6 to 42	237470
	500	6 to 54	237471

Polypro Non-Adjustable extensions are available upon request.

Inlet/Outlet	Product
Inches	Code

#### **HDPE** Plain End Vent

 1-1/2	237401
2	237402
3	237403
4	237404

#### **HDPE MPT Connection**

1-1/2	237421
2	237422
3	237423
4	237424

#### Variable Extension (2"of Vertical Adjustment)

<u>a</u>	5/7	6 to 36	237454
	15	6 to 36	237455
	30	6 to 36	237456
	55	6 to 36	237457
	100	6 to 36	237458
	150	6 to 36	237459
	200	6 to 36	237460
	275	6 to 36	237461
	360	6 to 36	-
	500	6 to 36	-

#### **FRP Overwrap**



5/7	-	237440
15	-	237441
30	-	237442
55	-	237443
100	-	237444
150	-	237445
200	-	237446
275	-	237447
360	-	237448
500	-	237449

FRP Overwrap is for tanks without extensions Please contact IPEX for FRP overwrap pricing on tanks with non-adjustable extensions .

#### **HDPE FPT Connection**

	1-1/2	237431
	2	237432
	3	237433
	4	237434

#### **HDPE Flange Connection**

1-1/2	237121
2	237131
3	237141
4	237142
6	237500

#### PolyPro Plain End Vent

1-1/2	237109
2	237110
3	237113
4	237114

#### PolyPro MPT Connection

1-1/2	237156
2	237157
3	237158
4	237159

	Inlet/Outlet Inches	Product Code		Diameter Inches	Product Code
PolyPro FPT Con	nection		Threaded Manway		
	1-1/2	237139		8	237450
	2	237140		16	237451
	3	237148		22	237452
	4	237149			

#### **PolyPro Flange Connection**

1-1/2	237116
2	237118
3	237120
4	237138

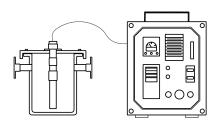
# Neutralizing Agent Limestone Bags 50 lbs 237321 TC50

NOTE:	F.O.B	Shipping	Location

Diameter Inches	Product Code
	Coue

#### Neutrasystem pH Monitoring & Recording System

pH Monitor w/ Tank & Alarm	237371
pH Monitor w/ Tank & Alarm & Chart	237331
pH Monitor w/ Alarm	237341
pH Monitor w/ Alarm & Chart	237351



## Tank Size Loading (lbs.)

#### Limestone Loading Guide for Neutralization

0	
5	50
15	125
30	250
55	500
100	1000
150	1500
200	2000
275	2500
360	3500
500	5250
700	8000
1000	10000
1250	12000
2000	18000

EZ Standard Domed & HD Flat covers are not suitable for pedestrian traffic. Always use steel pedestrian covers. Neutratanks are not rated for H-20 Live Loading. In areas requiring H-20 loading, position the tank below a Department of Transportation approved manhole cover. Regular tanks and 700 to 2000 gallon cylindrical tanks are available on request.

IPEX offers two compressed air systems designed to meet the requirements of a wide range of applications.

When you specify a high-performance piping systems from IPEX, you get the added benefits of a complete piping solution that is engineered for total integration, and backed by comprehensive, coast-to-coast support – all from one reliable source.

# Compressed Air Systems



Duratec Airline

# DURATEC AIRLINE SYSTEMS

# Duratec

Duratec is an innovative compressed air and inert gas distribution system designed to be absolutely leak-proof, installed quickly and easily, and maintained cost-effectively. As a result, Duratec saves you time and money.

Traditional metallic compressed air systems are a main cause of unnecessary energy use, excessive wear and tear on compressors and high consumption of compressor oils and filters. The culprits? Corrosion and leakage at pipe joints and fitting connections which often go undetected until they're discovered during a detailed compressed air system audit.

Duratec pipe comes in long 100 foot or 300 foot coils, which significantly reduces the number of joints in your system. Duratec fittings feature unique double o-ring seals to ensure long-term joint integrity. And the entire Duratec system can be easily and quickly installed, modified or expanded without the need for specialized equipment.

#### APPLICATIONS

- Plant air
   Inert gas distribution
- Manufacturing hand tool operation
- Manual and automated welding operations
- Semi-conductor tool hook up
- Valve actuation control systems
- Microbulk inert gas delivery systems
- Robotic installations

#### STANDARDS



CSA B51, B137.9 ASME B31.3, B31.9 NSI / ASTM F1282 ASTM F1974 FDA Compliant

National CRN 0A02020.2C (Some fittings do not have CRN registration. Contact IPEX Inc. for details.)

Certified to OSHA Safety Regulations

PE-RT – Aluminum –

PE-RT

#### QUICK INSTALLATION

#### Cutting and joining Duratec is fast and simple.

- 1. Cut pipe square using plastic pipe cutter.
- 2. Slide nut and split ring over pipe and bevel the inside of the pipe by inserting then rotating the beveling tool.

**DID YOU KNOW?** 

To make designing, sizing and installing

a Duratec compressed air system easy,

IPEX offers comprehensive reference

tools, such as our Duratec Technical Manual. To download this manual visit our website at www.ipexinc.com.

- 3. Push the fitting into the pipe.
- 4. Turn the nut finger tight plus one full turn with a wrench.











#### ADVANTAGES

#### Low Installation Costs

Duratec reduces costs on a typical installation not only for materials but also for labour and transportation costs when compared to traditional materials. How? Duratec's lightweight construction and simple assembly procedures.

#### **Ease of Handling**

Duratec is 75% lighter than the equivalent diameter of copper and SCH 40 carbon steel.

#### **Quick Removable Connections**

Threading is not required. All joints have double o-ring seals and can be quickly assembled or disassembled. Easy on-site modifications and repairs can be made.

#### **Quick Installation**

No special training or equipment is required to complete a Duratec system.

#### Clean

3

5

6

8

All Duratec pipe is packaged in cardboard boxes preventing contamination before use. The smooth PE-RT inner layer cannot rust, corrode or form loose scale. Clean air remains clean throughout the life of the system.

#### **Flexible Yet Rigid**

Due to its composite structure, Duratec pipe can be easily bent by hand and will maintain its desired shape. This unique feature allows for straight, professional looking installation and eliminates sagging.

#### **Lower Operating Costs**

Due to Duratec's advantages over metal systems, it costs you less time, labour and money to keep a Duratec system in optimal condition.

#### Pressure loss means money loss

Metal systems can lose pressure due to pin-hole leaks and leakage at connections, all of which result in increased energy costs. Duratec's high-quality construction, on the other hand, guarantees consistent pressure for years to come.

#### SHORT FORM SPECIFICATIONS

All compressed air and inert gas pipe in sizes 1" and smaller shall be PE-AL-PE composite pipe made with Raised Temperature Polyethylene and aluminum conforming to ASTM F1282 and CSA B137.9. PE-AL-PE pipe shall meet the health and safety requirements of OSHA. All compressed air and inert gas fittings in sizes 1" and smaller shall be nickel plated brass or 316 stainless steel and shall conform to the dimensional and physical requirements of ASTM F1974 and CSA B137.9.

All pipe, fittings and accessories shall be Duratec Air-Line as manufactured by IPEX.

#### Smooth Interior

Less friction means lower pressure drops and higher flow rates. This may allow for smaller pipe sizes to be used.

#### Extended Life

Duratec is designed not to rust, scale or pit. Once properly selected for the application and correctly installed, Duratec Airline Systems will provide years of maintenance-free service.

#### (11) Corrosion Resistant

Duratec's tough outer PE-RT (Polyethylene of Raised Temperature) layer protects it against corrosion and deterioration and ensures long service life even in the most aggressive manufacturing environments. Its inner PE-RT layer is unaffected by inert gases and commonlyused compressor oils. Combined with its industrial nickel-plated Duratec fittings, the system provides longterm performance superior to metal piping systems.

#### Fewer Fittings

Duratec pipe comes in convenient 100 ft. and 300 ft. coils eliminating several joints and the need for threading, or soldering.

#### Safe

Duratec's unique composite construction means that accidental impact or puncture of the pipe results in a safe, ductile mode of failure. Duratec pipe has been third-party tested and certified to stringent OSHA safety requirements for compressed air systems, standards that guarantee safety comes first.

#### ) Performance

IPEX engineered Duratec pipe and fittings to provide top-notch performance. Rated for long term continuous operating pressures of 200psi at 73°F and 160psi at 140°F, Duratec pipe and fitting assemblies are also capable of sustaining quick burst pressures in excess of 800psi. This built-in safety factor ensures system performance and provides peace of mind for designers and facility managers. 89





	Dimension inches	Product Code	Coil Length feet		Dimension inches	Prod Cod
HDPE-AL-HDPE	200 psi @ 73°F, 16	50 psi @ 140ºF	, ASTM F1282	Duratec x Male 1	Thread Adapter Stainle	ess Ste
	3/8	446024	100		3/8 D1 x 3/8 MPT SS	438
	3/8	446025	300		1/2 D1 x 1/2 MPT SS	438
	1/2	446026	100		3/4 D1 x 3/4 MPT SS	438
					1 D1 x 1 MPT SS	438
	1/2	446027	300	())))))		
	3/4	446030	100			
	3/4	446031	300			
	1	446032	100			
	1	446033	300			
				Durates Airlins		

Dimension	Product
inches	Code

#### **Duratec x Male Thread Adapter**

	3/8 D1 x 1/4 MPT	438081
$\mathcal{A}$	3/8 D1 x 3/8 MPT	438000
	3/8 D1 x 1/2 MPT	438001
	1/2 D1 x 1/2 MPT	438002
	3/4 D1 x 3/4 MPT	438003
	1 D1 x 1 MPT	438004

Duratec x Female	e Thread Adapter	
	3/8 D1 x 1/2 FPT	438005
	1/2 D1 x 1/2 FPT	438006
	3/4 D1 x 3/4 FPT	438007
	1 D1 x 1 FPT	438008

#### Duratec x Duratec 90° Elbow

	3/8 D1 x 3/8 D1	438079
	1/2 D1 x 1/2 D1	438080
	3/4 D1 x 3/4 D1	438067
	1 D1 x 1 D1	438068

#### Wall Bracket Multiport

Ő	3/4 x 1/2	437338	
	Inlet - 3/4 MPT		
	Outlet -	1/2 FPT	
0			

#### **Duratec Airline x Tubing Adapter**


3/8 D1 x 1/4 MPT	438041
3/8 D1 x 3/8 MPT	438042
1/2 D1 x 1/2 MPT	438043
3/4 D1 x 3/4 MPT	438044
1 D1 x 1 MPT	438045

438009

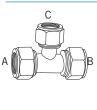
#### Duratec x Female Thread Wing Back (or Drop-Ear) 90° Elbow 1/2 D1 x 1/2 FPT



#### Duratec x Duratec x Duratec Tee

	3/8	438033
	1/2	438010
	3/4	438011
	1	438012

#### Duratec x Duratec x Duratec Reducing Tee



1/2 x 1/2 x 3/8	438034
3/4 x 1/2 x 1/2	438013
3/4 x 3/4 x 1/2	438014
3/4 x 1/2 x 3/4	438015
1 x 1 x 1/2	438016
1 x 3/4 x 3/4	438017
1 x 1 x 3/4	438018
AxBxC	

	Dimension inches	Product Code		Dimension inches	Product Code
Duratec Couplir	Ig		Plastic Pipe Cut	ter Replacement SS B	lade
	3/8	438020		-	438052
TT	1/2	438021			
	3/4	438022			
	1	438023			
			Duratec Pipe Cl	-	
				3/8	438063
Duratec x Cap				1/2	438064
	3/8	438036	- ((()))	3/4	438065
	1/2	438026		1	438066
H Ta	3/4	438027			
	1	438027			
			Replacement Sp	lit Ring	
				3/8 Split Ring D1	438046
5-in-1 Bevelling	στοοί		$\frown$	1/2 Split Ring D1	438047
	3/8" to 1" Beveling Tool	438050	- ( )	3/4 Split Ring D1	438048
	OLO TO T DEVEILING 1001	+30030	$\smile$	1 Split Ring D1	438049
	1/2 D1 x 1/2 D1 x 1/2 FPT 3/4 D1 x 3/4 D1 x 1/2 FPT	438019 438078	(	1/2 3/4 1	438054 438055 438056
Duratec Reduci	ng Coupling		Protective Heat	Shrink Sleeve 4" Heatshrink Sleeve	400001
$\sim$	1/2 x 3/8	438035		for 3/4", 1" Fittings	438061
The second	3/4 x 1/2	438024		4" Heatshrink Sleeve	420060
	1 x 3/4	438025	$\bigcirc$	for 1/2", 3/8" Fittings	438062
Duratec Airline	Rall Valvo		Composite Pipe	Bending Tool Kit up to	o 1"
	3/8	438037	-	1/2", 3/4", 1"	438057
$\sim$	1/2	438037		Bending Tool Kit	
	3/4				
	3/4	438039 438040		<	
	1	438040		3	
Plactic Dina C	ttor		Composite Pipe		
Plastic Pipe Cu		120051		1/2	438058
$\sim \sim$	3/8" to 1" Pipe Cutter	438051		3/4	438059
				1	438060



# Your Compressed Air System for the 21st Century

When your plant's compressed air system leaks, more than just air is getting out. You're losing money in the form of wasted energy, wear and tear on your compressors and increased operating and maintenance costs. Duratec<sup>®</sup> Airline, a unique time and moneysaving piping system, is designed to reduce leaks and costs.

A tough piping system that meets ASME codes and OSHA safety requirements, Duratec Airline requires less

time, labor and money to install and maintain than

traditional systems. Its long, lightweight coils cut down on the number of potential leak points in your system. Duratec fittings are quick and easy to install and feature double O-ring seals that ensure maximum joint integrity.

> Duratec requires no special tools or installation training and eliminates the need for soldering and threading. And because Duratec is so quickly and easily installed, modified, and adapted to existing metal systems, it can reduce your plant's downtime. So stop your compressed air system's

problems before they become big news - Install Duratec.

IPEX offers one of the most comprehensive ranges of high quality, high performance thermoplastic valves and actuation products available today. With more than 50 years of design and manufacturing experience, our lightweight, long life, maintenance free valves will save you time and money. Our high-tech automated manufacturing and testing facility ensures unparalleled reliability for each and every valve.

# Thermoplastic Valves



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# THERMOPLASTIC VALVES

## **Manual & Actuated Thermoplastic Valves**

IPEX offers one of the most comprehensive ranges of high quality, high performance thermoplastic valves and actuation products available today. With more than 50 years of design and manufacturing experience, our lightweight, long life, maintenance free valves will save both time and money.

Material options such as PVC, CPVC, PP, PVDF, and ABS make our corrosion resistant valves ideal for use in a wide variety of applications. Quarter turn pneumatic and electric actuation, pneumatically actuated diaphragm valves, and many options and accessories allow for fully automated control. Whether a valve is required for isolation, diversion, control, or throttling, IPEX has a solution to meet most valve applications in thermplastic piping.

#### APPLICATIONS

- Industrial Processes Irrigation
- Chemical Production 
   Aquatic Life

• Pool and Spa

- Water Treatment
- General Plumbing
- Water and Waste



WHAT TYPE OF VALVE TO USE	Ball Valves	Butterfly Valves	Diaphragm Valves	Check & Vent Valves	Specialty Valves
On/Off Service	$\checkmark$	1			
High Capacity	$\checkmark$	$\checkmark$			
Throttling	✓ VKR only	1	1		$\checkmark$
Quick & Frequent Cycling	$\checkmark$				$\checkmark$
Slurries/Dirty Fluids		~	1		
Filtering					$\checkmark$
Back Flow Prevention				1	
Air & Gas Release				1	
Electro-Mechanical Control					$\checkmark$
Actuation	$\checkmark$	1	<ul> <li>Image: A second s</li></ul>		

FPM (Fluoropolymer) is a generic term for Viton<sup>®</sup> seals.



#### VKD SERIES BALL VALVES - TRUE UNION

This next generation industrial valve features the patented Dual Block<sup>®</sup> system which allows locking of the union nuts in a preset position, assuring seal integrity under severe service conditions. A patented seat stop carrier, high quality stem and ball support system, integral mounting flange and bracketing, and a multifunctional locking handle (standard on sizes 2-1/2" to 4") set this valve apart from the rest. The VKD is available in PVC, CPVC, PP, and ABS with PTFE seats and either EPDM or FPM seals.

Pressure: up to 232 psi at 73°F depending on the material Sizes: 3/8" - 4"



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# 3 A L L V A L V E S

# VENTED VXD SERIES BALL VALVES - TRUE UNION

Size inches	PVC Product Code	Corzan CPVC Product Code
FE Seats		
3/8	353028	353000
1/2	353083	353021
3/4	353084	353022
1	353085	353023
1-1/4	053503	353024
1-1/2	053504	353025
2	053505	353026
2-1/2	053506	353027
3	353086	353029
4	053562	353030
	FE Seats 3/8 1/2 3/4 1 1-1/4 1-1/2 2 2-1/2 3	Size Inches         Product Code           FE Seats         3/8         353028           1/2         353083         3/4           3/4         353084         1           1         353085         1-1/4           1-1/4         053503         1-1/2           2         053505         2-1/2           3         353086         3

Note: VKD vented ball valves to be used for Sodium Hypochlorite service. Please consult IPEX for other vented applications.

End Connection	Size inches	EPDM Product Code	FPM Product Code
PVC w/ PTFE	Seats		
S/T	3/8	253067	253068
S/T	1/2	053461	053467
S/T	3/4	053462	053468
S/T	1	053463	053469
S/T	1-1/4	053464	053470
S/T	1-1/2	053465	053471

053466

053539

053540

053541

053472

053542

053543

053544

#### Corzan® CPVC w/ PTFF Seats

2

2-1/2

3 4

S/T

Socket

Socket

Socket

		cals	
S/T	1/2	053473	253008
S/T	3/4	053474	253009
S/T	1	053475	253010
S/T	1-1/4	053476	253011
S/T	1-1/2	053477	253012
S/T	2	053478	253013
Socket	2-1/2	053545	053548
Socket	3	053546	053549
Socket	4	053547	053550

#### PP w/ PTFE Seats

Threaded	1/2	053525	253002
Threaded	3/4	053526	253003
Threaded	1	053527	253004
Threaded	1-1/4	053528	253005
Threaded	1-1/2	053529	253006
Threaded	2	053530	253007

#### **PP w/ PTFE Seats**

Socket	20mm	053513	053519
Socket	25mm	053514	053520
Socket	32mm	053515	053521
Socket	40mm	053516	053522
Socket	50mm	053517	053523
Socket	63mm	053518	053524

#### TKD SERIES 3-WAY BALL VALVES - TRUE UNION

The TKD offers a host of advanced features that set it apart from other multi-port valves. The patented seat stop carrier allows for in-line micro-adjustment of the ball seating, and features o-ring cushioning to minimize wear and prevent seizing. Integral mounting flange and bracketing allows for direct actuation and simple support, while a locking handle can prevent improper positioning. The TKD is available in PVC with PTFE seats and either EPDM or FPM seals. Other materials are available upon request.

Pressure: 232 psi at 73°F Sizes: 1/2" – 2"



Size inches	EPDM Product Code	FPM Product Code
Seats , L-I	Port	
1/2	253844	253856
3/4	253845	253857
1	253846	253858
1-1/4	253847	253859
1-1/2	253848	253860
2	253849	253861
	inches Seats , L-1 1/2 3/4 1 1-1/4 1-1/2	inches         Product Code           Seats , L-Port

#### PVC, w/ PTFE Seats , T-Port

S/T	1/2	253850	253862
S/T	3/4	253851	253863
S/T	1	253852	253864
S/T	1-1/4	253853	253865
S/T	1-1/2	253854	253866
S/T	2	253855	253867

Ball valves are generally used for on/off service, but can range from simple molded-in-place construction to high-end industrial designs with many features and benefits. Multi-port ball valves allow for mixing, diverting, and bypassing flow. Extensive material options provide for complete chemical compatibility in highly corrosive processes. Many ball valves feature full port flow, blocking true union ends, and compact ergonomic designs allowing for simple installation and maintenance.

#### VKR SERIES REGULATING BALL VALVES - TRUE UNION

The new VKR Series Regulating Ball Valves combine the reliability and safety features of IPEX VKD ball valves with a newly designed profiled ball. The patented ball design provides linear flow regulation throughout its full range of operation even when the valve is open just a few degrees. The VKR is available in PVC with PTFE seats and either EPDM or FPM seals.

Pressure: 232 psi at 73°F Sizes: 1/2" – 2"



Size inches	EPDM Product Code	FPM Product Code
Seats		
1/2	353684	353675
3/4	353683	353676
1	353682	353678
1-1/4	353681	353685
1-1/2	353680	353686
2	353679	353677
	inches Seats 1/2 3/4 1 1-1/4 1-1/2	inches         Product Code           Seats

#### VKD AND TKD BALL VALVE ACCESSORIES



Size inches	Product Code	
Locking Handle Kit - VKD & TKD		
3/8 & 1/2	253014	
3/4 & 1	253015	
1-1/4 & 1-1/2	253016	
2	253017	

Note: The locking attachment fits on the standard handle

Size	Dimensions		Product
inches	Α	B (min)	Code

#### Stem Extension Kit - VKD & TKD

3/8 & 1/2	25mm	2"	154062
3/4	25mm	2"	154063
1	25mm	2"	154064
1-1/4	32mm	2"	154065
1-1/2	32mm	2"	154066
2	32mm	2"	154067

Note: The kit includes top and bottom PVC components, as well as a 6" length of extension pipe that must be solvent welded together to achieve the desired extension length. The minimum length to which the extension pipe can be cut is shown in the adjacent table. For longer extensions, contact IPEX Customer Service.

Size	Product
inches	Code

#### Wall / Panel Mounting Kit - VKD only

U	
3/8 thru 1	154322
1-1/4 thru 2	154323

Note: The kit includes the mounting plate, 2 brass inserts and 2 screws

Size	PVC Kit	CPVC Kit
inches	Product Code	Product Code

#### ANSI 150 Flanging Kit - VKD & TKD

3/8 & 1/2	154324	154330
3/4	154325	154331
1	154326	154332
1-1/4	154327	154333
1-1/2	154328	154334
2	154329	154335

PVC Kit includes: 1 PVC Flange & Nut, 1 PVDF locking ring and 1 True union nut.

CPVC Kit includes: 1 CPVC Flange & Nut, 1 PVDF locking ring and 1 True union nut.

This is a NON-STOCKING item. For OEM business, please contact Customer Service for pricing and stocking options.







В

#### **VXE SERIES BALL VALVES**

These ultra-compact valves feature a full-port, bi-directional double block design. The true union style allows the valve to be easily removed from the piping system and fully serviced. A threaded seat stop carrier provides improved seal integrity under tough service conditions while the removable handle also functions as a tool for ball seat adjustment.

The VXE Series True Union Ball Valves represent the lastest innovation in thermoplastic ball valve manufacturing technology. The VXE Series is designed for industrial, general purpose and O.E.M applications. This valve features an ultracompact double block design, and full port bi-directional operation. The true union design allows the valve to be easily removed from the piping system and fully serviced. A threaded seat stop carrier provides improved seal integrity under tough service conditions while the EasyFit multifunction handle doubles as a tool for ball seat adjustment, and for tightening union nuts precisely.

Pressure: up to 232 psi at 73°F depending on the size. Sizes 1/2" - 4"



#### **EXAMPLE APPLICATIONS**

- Plant water supply and distribution
- ✓ Wash-water and recovery systems
- ✓ Acid Products Handling for Refineries, Metal Works, etc.
- ✓ Alum and Ferric Chloride Handling
- ✓ Pulp and Chemical Recovery Systems ✓ Irrigation
- ✓ Deionized Water

- ✓ Water treatment
- ✓ Swimming pools
- ✓ Chlorine Injection Systems Bleach, Dye and Acid Lines
- ✓ Aquariums



End Conn.	Size inches	EPDM Product Code	FPM Product Code
PVC w/ PT	FE Seats		
S/T	1/2	053001	353002
S/T	3/4	053003	353004
S/T	1	053005	353006
S/T	1-1/4	053007	353008
S/T	1-1/2	053009	353101
S/T	2	053011	353012
Socket	2-1/2	053623	353624
Socket	3	053013	353014
Socket	4	053015	353016
Threaded	3	053017	353018
Threaded	4	053019	353020

#### Corzan<sup>®</sup> CPVC w/ PTFE Seats

S/T	1/2	053041	353042
S/T	3/4	053043	353044
S/T	1	053045	353046
S/T	1-1/4	053047	353048
S/T	1-1/2	053049	353050
S/T	2	053051	353052
Socket	2-1/2	053647	353648
Socket	3	053053	353054
Socket	4	053055	353056
Threaded	3	053057	353058
Threaded	4	053059	353060

#### **VENTED VXE SERIES BALL VALVES**

End Conn.	Size inches	PVC Product Code	Corzan CPVC Product Code
FPM w/ PT	FE Seats		
S/T	1/2	353031	353067
S/T	3/4	353032	353068
S/T	1	353033	353069
S/T	1-1/4	353034	353070
S/T	1-1/2	353035	353071
S/T	2	353036	353072
Socket	2-1/2	353037	353073
Socket	3	353038	353074
Socket	4	353039	353075
Threaded	3	353040	353076
Threaded	4	353061	353077

Note: VXE vented ball valves to be used for Sodium Hypochlorite service. Please consult IPEX for other vented applications.

#### **MP SERIES COMPACT BALL VALVES**

Both Schedule 40 White PVC and Schedule 80 Grey PVC are available with either socket or threaded end connections. EPDM seals and PTFE seats make this valve ideally suited to all kinds of plumbing and industrial applications where a compact, inexpensive on/off valve is required.

Pressure: 150 psi at 73°F Sizes: 1/2" - 2"



End Connection	Size inches	Sch 80 Grey Product Code	Sch 40 White Product Code
PVC, EPDM w	/ PTFE		
Socket	1/2	052000	052277
Socket	3/4	052006	052278
Socket	1	052007	052279
Socket	1-1/4	052009	052280
Socket	1-1/2	052019	052281
Socket	2	052024	052282

#### PVC, EPDM w/ PTFE

Threaded	1/2	052026	052283
Threaded	3/4	052029	052284
Threaded	1	052107	052285
Threaded	1-1/4	052108	052286
Threaded	1-1/2	052109	052287
Threaded	2	052144	052288



#### **FK SERIES BUTTERFLY VALVES**

The FK offers superior strength as well as excellent chemical resistance needed to operate in the corrosive environments often found near flanged connections. The special trapezoid shape of the liner and a serrated body cavity guarantee a bubble tight seal while keeping break-away torque at an absolute minimum. Double self-lubricating seals (available in either EPDM or FPM), direct actuator mount capability, and choice of a lever handle or mounted gear box are just a few more features of this technologically advanced valve. The body is made of standard glass-filled PP while discs are available in PP, PVC, CPVC, PVDF, and ABS.

Pressure: up to 150 psi at 73°F depending on the size Sizes:  $1\mathchar`1\mathchar`2"-12"$ 



Size inches	EPDM Product Code	FPM Product Code
PP Disc, Wafer S	Style	
1-1/2	053198	053200

1-1/2	033130	033200
2	053199	053201
2-1/2	052145	052147
3	053105	053153
4	053106	053154
5	052146	052148
6	053107	053155
8	053108	053156

Note: Available with stainless steel shaft.

Size	Product
inches	Code

#### Infinite Adjustable Handle Kit

1-1/2 & 2	154173
2-1/2	153968
3 & 4	153969
5 & 6	153970
8	153971

Note: Available with stainless steel shaft.

Size inches	EPDM Product Code	FPM Product Code
PP Disc, Wafer S	tyle, Gear Box	
2-1/2	253145	253147
3	253105	253153
4	253106	253154
5	253146	253148
6	253107	253155
8	253108	253156
10	153014	153016
12	153015	153017

Note: Available with stainless steel shaft.

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WITH MOUNTED GEAR BOX

#### FK SERIES LUGGED BUTTERFLY VALVES

This FK version features the world's first integral lug design. Unlike other plastic butterfly valves, these valves feature stainless steel lugs permanently anchored in the body of the valve. This unique design provides for full bi-directional operation, and allows disassembly and assembly of the downstream flange connection without weakening the integrity of the upstream connection to the pressurized line. The same body, disc, and seal material options as the normal FK are available for the lugged version.

Pressure: up to 150 psi at 73°F depending on the size Sizes: 2-1/2" - 12"

Size inches	EPDM Product Code	FPM Product Code
PP Disc, SS Lugs		
2-1/2	053133	053139
3	053134	053140
4	053135	053141
5	053105	053142
6	053136	053143
8	053138	053144

Note: PVC, CPVC, ABS, and PVDF discs are available on request. Note: Available with stainless steel shaft.

#### PP Disc, SS Lugs, Gear Box

2-1/2	253133	253139
3	253134	253140
4	253135	253141
5	253136	253142
6	253137	253143
8	253138	253144
10	053328	053330
12	053329	053331

Note: PVC, CPVC, ABS, and PVDF discs are available upon request. 14"-24" butterfly valves are available on request. Note: Available with stainless steel shaft.

WITH MOUNTED GEAR BOX



#### **FE SERIES BUTTERFLY VALVES**

The FE incorporates many of the features and benefits of our industrial FK valve yet is one of the most competitively priced thermoplastic butterfly valves available today. The all PVC construction with EPDM liner makes this valve the perfect choice for applications ranging from swimming pools to chemical processes. The FE can be operated by either a lever handle or mounted gear box.



Size	EPDM
inches	Product Code

#### PVC Body & Disc, Wafer Style

1-1/2	053202
2	053203
2-1/2	053842
3	053081
4	053082
5	053843
6	053083
8	053084

NBR and Viton<sup>®</sup> lined valves are available upon request.

#### PVC Body & Disc, Wafer Style, Gear Box

2-1/2	253842
3	253081
4	253082
5	253843
6	253083
8	253084
10	052264
12	052265

NBR and FPM lined valves are available upon request.

These highly versatile valves can be used for simple on/off service but also for processes requiring precise throttling. The extensive size range and material availability make them suitable for a wide range of applications. With simple, direct mounting for actuation, automated process control can be easily achieved.

Note: 14" - 24" Butterfly Valves are available. Price and delivery on request

#### VM SERIES DIAPHRAGM VALVES - MANUAL HAND WHEEL

The VM series weir-style diaphragm valves are available in PVC, CPVC, PP, or PVDF, four body styles, and three choices of diaphragms (EPDM, FPM, or PTFE). Able to be mounted in any position, the VM is ideal for either very clean or abrasive slurry applications. A unique and proprietary PTFE diaphragm design, available automation, and multiple accessories make this one of the most advanced and versatile lines in the industry.

Pressure: up to 150 psi at 73°F depending on the size Size: 1/2" - 4"



End Connection	Size inches	EPDM Product Code	FPM Product Code	PTFE Product Code
Corzan® C	PVC Bo	ody		
Spigot	1/2	054247	054256	054265
Spigot	3/4	054248	054257	054266
Spigot	1	054249	054258	054267
Spigot	1-1/4	054250	054259	054268
Spigot	1-1/2	054251	054260	054269
Spigot	2	054252	054261	054270
Spigot	2-1/2	054253	054262	054271
Spigot	3	054254	054263	054272
Spigot	4	054255	054264	054273
Corzan® C	PVC Bo	dy		
T/U	1/2	054274	054280	054286
T/U	3/4	054275	054281	054287
T/U	1	054276	054282	054288
T/U	1-1/4	054277	054283	054289
T/U	1-1/2	054278	054284	054290
T/U	2	054279	054285	054291
Corzan® C	PVC Bo	dy		
Flanged	1/2	054292	054301	054310
Flanged	3/4	054293	054302	054311
Flanged	1	054294	054303	054312
Flanged	1-1/4	054295	054304	054313
Flanged	1-1/2	054296	054305	054314
Flanged	2	054297	054306	054315
Flanged	2-1/2	054298	054307	054316
Flanged	3	054299	054308	054317
Flanged	4	054300	054309	054318

Note: EPDM diaphragms have EPDM o-rings, FPM and PTFE diaphragms have FPM o-rings. For ABS and u-PP VM diaphragm valves, please refer to the Duraplus ABS Industrial and Enpure. Other options are available on request. VM Series Diaphragm valves are made-to-order.

End	Size	EPDM	FPM	PTFE
Connection	inches	Product Code	Product Code	Product Code
VC Body				
Spigot	1/2	054175	054184	054193
Spigot	3/4	054176	054185	054194
Spigot	1	054177	054186	054195
Spigot	1-1/4	054178	054187	054196
Spigot	1-1/2	054179	054188	054197
Spigot	2	054180	054189	054198
Spigot	2-1/2	054181	054190	054199
Spigot	3	054182	054191	054200
Spigot	4	054183	054192	054201
VC Body				
-	1.0	054000	054014	054000
T/U	1/2	054202	054214	054208
T/U	3/4	054203	054215	054209
T/U	1	054204	054216	054210
T/U	1-1/4	054205	054217	054211
T/U	1-1/2	054206	054218	054212
T/U	2	054207	054219	054213
VC Body				
Flanged	1/2	054220	054229	054238
Flanged	3/4	054221	054230	054239
Flanged	1	054222	054231	054240
Flanged	1-1/4	054223	054232	054241
Flanged	1-1/2	054224	054233	054242
Flanged	2	054225	054234	054243
Flanged	2-1/2	054226	054235	054244
Flanged	3	054227	054236	054245
Flanged	4	054228	054237	054246
0				
End	Size	EPDM	FPM	PTFE
Connection	mm	Product Code	Product Code	Product Cod
P Body				
Spigot	20mm	054319	054328	054337
Spigot	25mm	054320	054329	054338
Spigot	32mm	054321	054330	054339
Spigot	40mm	054322	054331	054340
Spigot	50mm	054323	054332	054341
Spigot	63mm	054324	054333	054342
Spigot	75mm	054325	054334	054343
Spigot	90mm	054326	054335	054344
Spigot	110mm	054327	054336	054345
P Body				
-	20mm	054346	054352	054358
1/U			054353	054359
T/U T/U	25mm	054347		
T/U	25mm 32mm	054347 054348		
T/U T/U	32mm	054348	054354	054360
T/U T/U T/U	32mm 40mm	054348 054349	054354 054355	054360 054361
T/U T/U	32mm	054348	054354	054360

#### VM SERIES PNEUMATIC DIAPHRAGM VALVES - NORMALLY OPEN (AIR TO AIR) PNEUMATIC

Pressure: up to 150 psi at 73°F depending on the size Size: 1/2"-4"



End	C:	EDDM	EDM -	
End Connection	Size inches	EPDM Product Code	FPM Product Code	PTFE Product Code
Connootion	monoc	i roudor oodo	i roudot oodo	
Corzan® C	PVC Bo	dy		
Spigot	1/2	054482	054491	054500
Spigot	3/4	054483	054492	054501
Spigot	1	054484	054493	054502
Spigot	1-1/4	054485	054494	054503
Spigot	1-1/2	054486	054495	054504
Spigot	2	054487	054496	054505
Spigot	2-1/2	054488	054497	054506
Spigot	3	054489	054498	054507
Spigot	4	054490	054499	054508
Corzan® C	PVC Bo	dy		
T/U	1/2	054509	054515	054521
T/U	3/4	054510	054516	054522
T/U	1	054511	054517	054523
T/U	1-1/4	054512	054518	054524
T/U	1-1/2	054513	054519	054525
T/U	2	054514	054520	054526
Corzan® C	PVC Bo	dy		
Flanged	1/2	054527	054536	054545
Flanged	3/4	054528	054537	054546
Flanged	1	054529	054538	054547
Flanged	1-1/4	054530	054539	054548
Flanged	1-1/2	054531	054540	054549
Flanged	2	054532	054541	054550
Flanged	2-1/2	054533	054542	054551
Flanged	3	054534	054543	054552
Flanged	4	054535	054544	054553

End Connection	Size inches	EPDM Product Code	FPM Product Code	PTFE Product C
PVC Body				
Spigot	1/2	054410	054419	05442
Spigot	3/4	054411	054420	05442
Spigot	1	054412	054421	05443
Spigot	1-1/4	054413	054422	05443
Spigot	1-1/2	054414	054423	05443
Spigot	2	054415	054424	05443
Spigot	2-1/2	054416	054425	05443
Spigot	3	054417	054426	05443
Spigot	4	054418	054427	05443
PVC Body				
T/U	1/2	054437	054443	05444
T/U	3/4	054438	054444	05445
T/U	1	054439	054445	05445
T/U	1-1/4	054440	054446	05445
T/U	1-1/2	054441	054447	05445
T/U	2	054442	054448	05445
PVC Body				
Flanged	1/2	054455	054464	05447
Flanged	3/4	054456	054465	05447
Flanged	1	054457	054466	05447
Flanged	1-1/4	054458	054467	05447
Flanged	1-1/2	054459	054468	05447
Flanged	2	054460	054469	05447
Flanged	2-1/2	054461	054470	05447
Flanged	3	054462	054471	05448
Flanged	4	054463	054472	05448
End Connection	Size mm	EPDM Product Code	FPM Product Code	PTFE Product C
Connection				
Connection				Product C
Connection PP Body	mm	Product Code	Product Code	Product C
Connection PP Body Spigot	mm 20mm	Product Code	Product Code 054563	Product 0 05457 05457
Connection PP Body Spigot Spigot Spigot	mm 20mm 25mm	Product Code 054554 054555	Product Code 054563 054564	Product C 05457 05457 05457
Connection PP Body Spigot Spigot Spigot Spigot	mm 20mm 25mm 32mm	Product Code 054554 054555 054556	Product Code 054563 054564 054565	Product C 05457 05457 05457 05457
Connection PP Body Spigot Spigot Spigot Spigot Spigot	mm 20mm 25mm 32mm 40mm 50mm	Product Code 054554 054555 054556 054557 054558	Product Code 054563 054564 054565 054566 054567	Product 0 05457 05457 05457 05457 05457
Connection PP Body Spigot Spigot Spigot Spigot Spigot Spigot	mm 20mm 25mm 32mm 40mm 50mm 63mm	Product Code 054554 054555 054556 054557 054558 054559	Product Code 054563 054564 054565 054566 054567 054568	Product 0 05457 05457 05457 05457 05457 05457
Connection PP Body Spigot Spigot Spigot Spigot Spigot Spigot Spigot	mm 20mm 25mm 32mm 40mm 50mm 63mm 75mm	Product Code 054554 054555 054556 054557 054558 054559 054560	Product Code 054563 054564 054565 054566 054567 054568 054569	Product 0 05457 05457 05457 05457 05457 05457 05457
Connection PP Body Spigot Spigot Spigot Spigot Spigot Spigot	mm 20mm 25mm 32mm 40mm 50mm 63mm	Product Code 054554 054555 054556 054557 054558 054559	Product Code 054563 054564 054565 054566 054567 054568	Product 0 05457 05457 05457 05457 05457 05457 05457 05457
Connection PP Body Spigot Spigot Spigot Spigot Spigot Spigot Spigot Spigot	mm 20mm 25mm 32mm 40mm 50mm 63mm 75mm 90mm	Product Code 054554 054555 054556 054557 054558 054559 054560 054561	Product Code 054563 054564 054565 054566 054567 054568 054569 054570	Product 0 05457 05457 05457 05457 05457 05457 05457 05457
Connection PP Body Spigot Spigot Spigot Spigot Spigot Spigot Spigot Spigot PP Body	mm 20mm 25mm 32mm 40mm 50mm 63mm 75mm 90mm 110mm	Product Code 054554 054555 054557 054558 054559 054560 054561 054562	Product Code 054563 054565 054565 054567 054568 054569 054570 054571	Product 0 05457 05457 05457 05457 05457 05457 05457 05458
Connection PP Body Spigot Spigot Spigot Spigot Spigot Spigot Spigot Spigot PP Body T/U	mm 20mm 25mm 32mm 40mm 50mm 63mm 75mm 90mm 110mm	Product Code 054554 054555 054557 054558 054559 054560 054561 054562	Product Code 054563 054564 054565 054567 054568 054569 054570 054571	Product 0 05457 05457 05457 05457 05457 05457 05458 05458
Connection PP Body Spigot Spigot Spigot Spigot Spigot Spigot Spigot Spigot PP Body T/U	mm 20mm 25mm 32mm 40mm 50mm 63mm 75mm 90mm 110mm 20mm 25mm	Product Code 054554 054555 054557 054558 054559 054560 054561 054562 054562	Product Code 054563 054565 054565 054567 054568 054569 054570 054571 054587 054587	Product 0 05457 05457 05457 05457 05457 05457 05457 05458 05458
Connection PP Body Spigot Spigot Spigot Spigot Spigot Spigot Spigot Spigot T/U T/U T/U	mm 20mm 25mm 32mm 40mm 50mm 63mm 75mm 90mm 110mm 20mm 25mm 32mm	Product Code 054554 054555 054557 054558 054559 054560 054561 054562 054562	Product Code 054563 054565 054565 054567 054568 054569 054570 054571 054571 054587 054587	Product 0 05457 05457 05457 05457 05457 05457 05457 05458 05458 05459 05459
Connection PP Body Spigot Spigot Spigot Spigot Spigot Spigot Spigot Spigot PP Body T/U T/U T/U T/U	mm 20mm 25mm 32mm 40mm 50mm 63mm 75mm 90mm 110mm 20mm 25mm 32mm 40mm	Product Code 054554 054555 054557 054558 054559 054560 054561 054562 054562 054581 054581 054583 054583	Product Code 054563 054565 054565 054567 054568 054569 054570 054571 054587 054587 054588 054589 054589	Product 0 05457 05457 05457 05457 05457 05457 05457 05458 05458 05459 05459 05459
Connection PP Body Spigot Spigot Spigot Spigot Spigot Spigot Spigot Spigot T/U T/U T/U	mm 20mm 25mm 32mm 40mm 50mm 63mm 75mm 90mm 110mm 20mm 25mm 32mm	Product Code 054554 054555 054557 054558 054559 054560 054561 054562 054562	Product Code 054563 054565 054565 054567 054568 054569 054570 054571 054571 054587 054587	

Note: EPDM diaphragms have EPDM o-rings, FPM and PTFE diaphragms have FPM o-rings. For ABS and u-PP VM diaphragm valves, please refer to the Duraplus ABS Industrial and Enpure. Other options are available on request. VM Series Diaphragm valves are made-to-order.

#### VM SERIES PNEUMATIC DIAPHRAGM VALVES - NORMALLY CLOSED PNEUMATIC

Pressure: up to 150 psi at 73°F depending on the size Size: 1/2" - 4"



End Connection	Size inches	EPDM Product Code	FPM Product Code	PTFE Product Code	
CONNECTION	IIICIICS	riouuci Goue	riouuci Goue	riouuci Goue	
Corzan® CPVC Body					
Spigot	1/2	054716	054725	054734	
Spigot	3/4	054717	054726	054735	
Spigot	1	054718	054727	054736	
Spigot	1-1/4	054719	054728	054737	
Spigot	1-1/2	054720	054729	054738	
Spigot	2	054721	054730	054739	
Spigot	2-1/2	054722	054731	054740	
Spigot	3	054723	054732	054741	
Spigot	4	054724	054733	054742	
Corzan® C	PVC Bo	dy			
T/U	1/2	054743	054749	054755	
T/U	3/4	054744	054750	054756	
T/U	1	054745	054751	054757	
T/U	1-1/4	054746	054752	054758	
T/U	1-1/2	054747	054753	054759	
T/U	2	054748	054754	054760	
Corzan® C	PVC Bo	dy			
Flanged	1/2	054761	054770	054780	
Flanged	3/4	054762	054771	054781	
Flanged	1	054763	054772	054782	
Flanged	1-1/4	054764	054773	054783	
Flanged	1-1/2	054765	054774	054784	
Flanged	2	054766	054775	054785	
Flanged	2-1/2	054767	054776	054786	
Flanged	3	054768	054778	054787	
Flanged	4	054769	054779	054788	

End Size **EPDM** FPM PTFE Connection Product Code Product Code Product Code inches **PVC Body** Spigot 1/2054644 054653 054662 Spigot 3/4 054645 054654 054663 Spigot 1 054646 054655 054664 Spigot 1 - 1/4054647 054656 054665 1 - 1/2054648 054657 054666 Spigot 054649 054658 054667 Spigot 2 2-1/2 054650 054659 054668 Spigot 3 054651 054660 054669 Spigot Spigot 4 054652 054661 054670 **PVC Body** T/U 1/2054671 054677 054683 T/U 3/4 054672 054678 054684 T/U 054673 054679 054685 1 T/U 1 - 1/4054674 054680 054686 054687 T/U 1 - 1/2054675 054681 T/U 054676 054688 2 054682 **PVC Body** Flanged 1/2 054689 054698 054707 3/4 Flanged 054690 054699 054708 Flanged 1 054691 054700 054709 1 - 1/4054692 054710 Flanged 054701 1 - 1/2Flanged 054693 054702 054711 Flanged 2 054694 054703 054712 Flanged 2-1/2 054695 054704 054713 3 054705 054714 Flanged 054696 Flanged 4 054697 054706 054715 End Size **EPDM** FPM PTFE Product Code Product Code Product Code Connection mm **PP Body** 20mm 054789 054798 054807 Spigot Spigot 25mm 054790 054799 054808 Spigot 32mm 054791 054800 054809 40mm 054792 054801 054810 Spigot 50mm 054793 054802 054811 Spigot 63mm 054794 054803 054812 Spigot 054804 054813 Spigot 75mm 054795 90mm 054796 054805 054814 Spigot 110mm 054797 054806 054815 Spigot **PP Body** T/U 20mm 054816 054824 054830 T/U 25mm 054819 054825 054831 T/U 32mm 054820 054826 054832 T/U 40mm 054821 054827 054833 T/U 50mm 054822 054828 054834 T/U 63mm 054823 054829 054835

Note: EPDM diaphragms have EPDM o-rings, Viton<sup>®</sup> and PTFE diaphragms have Viton<sup>®</sup> o-rings. Other options are available on request. VM Series Diaphragm valves are made-to-order.

#### **DV SERIES DIAPHRAGM VALVES - MANUAL HANDWHEEL**

The DV is a rugged industrial product ideal for throttling or use in abrasive slurry lines. The raising position indicator also functions as an adjustable travel stop. This feature can be used to avoid over-compression of the EPDM or PTFE diaphragm, or as a travel limiter allowing different settings for the "closed" position. The molded flanged body eliminates potentially leaky joints while featuring end-to-end dimensions identical to most plastic lined metal diaphragm valves, allowing for direct replacement.

Pressure: up to 150 psi at 73°F depending on the size Sizes: 1/2"-6"



End Connection	Size inches	EPDM Product Code
PVC Body		
Flanged	1/2	052196
Flanged	3/4	052197
Flanged	1	052198
Flanged	1-1/2	052207
Flanged	2	052208
Flanged	3	052209
Flanged	4	052217
Flanged	6	052218

Size inches	PTFE Product Code
1/2	052296
3/4	052297
1	052298
1-1/2	052299
2	052354
3	052355
4	052356
6	052357
	1/2 3/4 1 1-1/2 2 3 4

#### CM SERIES COMPACT DIAPHRAGM VALVES

The CM is a compact design with true union ends, available in PVC, CPVC, PP, or PVDF. With three diaphragm options (EPDM, FPM, or PTFE), these manually operated or pneumatically actuated valves are ideal for OEMs. A standard position indicator and integrated mounting bushings complete the long list of features.

Pressure: up to 90 psi at  $73^\circ\text{F}$  Size: 1/2" in PVC and CPVC, 16 mm – 20 mm in PP and PVDF



End Connection	Size inches	EPDM Product Code	FPM Product Code	PTFE Product Code
PVC Body				
T/U S/T	3/8	253071	-	253072
T/U S/T	1/2	253073	-	253074
T/U Socket	1/2	054127	054129	054131
Corzan® C	PVC Bo	ody		
T/U Socket	1/2	054128	054130	054132
End Connection	Size mm	EPDM Product Code	FPM Product Code	PTFE Product Code
PP Body				
Socket	16mm	054133	054136	054139
Spigot	20mm	05/13/	05/1137	05/1/0

## Spigot 20mm 054134 054137 054140 T/U Socket 20mm 054135 054138 054141

#### **PVDF Body**

Socket	16mm	054142	054145	054148
Spigot	20mm	054143	054146	054149
T/U Socket	20mm	054144	054147	054150

#### **CM SERIES COMPACT DIAPHRAGM VALVES - NORMALLY CLOSED PNEUMATIC**

Pressure: up to 90 psi at 73°F Size: 1/2" in PVC and CPVC, 16 mm - 20 mm in PP and PVDF



End Connection	Size inches	EPDM Product Code	FPM Product Code	PTFE Product Code
PVC Body				
T/U Socket	1/2	054151	054152	054153
Corzan® C	PVC Bo	dy		
T/U Socket	1/2	054154	054155	054156
End Connection	Size mm	EPDM Product Code	FPM Product Code	PTFE Product Code
PP Body				
Socket	16mm	054157	054160	054163
Spigot	20mm	054158	054161	054164
T/U Socket	20mm	054159	054162	054165
PVDF Body	1			
Socket	16mm	054166	054169	054172
Spigot	20mm	054167	054170	054173
T/U Socket	20mm	054168	054171	054174
Note: FPDM	diaphrag	ms have EPDM	o-rings FPM a	nd PTFF

Note: EPDM diaphragms have EPDM o-rings FPM and PTFE diaphragms have Viton® o-rings.

#### DM SERIES DIAPHRAGM VALVES - DIRECT ACTING PNEUMATIC

108

Available in both PVC and CPVC, and with either an EPDM or Viton® diaphragm, its rugged construction allows the ultracompact DM to handle even extremely aggressive media. The direct operation of the diaphragm does not require a closing spring, which makes the small DM particularly suitable when space is at a premium.

Pressure: up to 115 psi at 73°F depending upon the available control pressure

Sizes: 1/2" - 2"



End Connection	Size inches	EPDM Product Code	FPM Product Code
PVC Body			
Spigot	1/2	054880	054886
Spigot	3/4	054881	054887
Spigot	1	054882	054888
Spigot	1-1/4	054883	054889
Spigot	1-1/2	054884	054890
Spigot	2	054885	054891
PVC Body			
True Union	1/2	054892	054898
True Union	3/4	054893	054899
True Union	1	054894	054900
True Union	1-1/4	054895	054901
True Union	1-1/2	054896	054902
True Union	2	054897	054903
PVC Body			
Flanged	1/2	054904	054910
Flanged	3/4	054905	054911
Flanged	1	054906	054912
Flanged	1-1/4	054907	054913
Flanged	1-1/2	054908	054914
Flanged	2	054909	054915

#### **DIAPHRAGM VALVES - AUTOMATION & ACCESSORIES**

IPEX diaphragm valves can be pneumatically actuated providing precise control of critical applications. The normally closed (fail close), normally open (fail open), and double acting VM valves make up of one of the most extensive ranges in the industry. The actuated CM provides a compact solution to automated needs while the DM employs an efficient direct acting design. All pneumatic diaphragm valves can be outfitted with many options and accessories such as: stroke limiters, optical and electric position indicators, electro-pneumatic positioners, pilot valves, and various combinations thereof.

Valve Series	Size inches	Product Code

053074 053075

Pilot Solenoid Valve - Direct Mount, NBR Seals, 110 VAC



	,
VM	1/4
CM	1/8

#### Pilot Solenoid Valve - Remote Mount, NBR Seals, 110 VAC



N/A 1/4 053076

Note: Other voltages are available upon request.

#### **Optical Position Indicator**



VM / NC - NO - DA	1/2 - 2	054997		
VM / NC - NO - DA	2-1/2 - 4	054998		
Dustastian ann insluded, and assembly				

Protection cap included, see assembly instructions.

#### **Stroke Limiter**

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	58	μ	۰.		

VM / NC	1/2 - 1-1/2	054991
VM / NC	2	054992
*VM / NC	2-1/2 - 4	054993
VM / NO - DA	1/2 - 2	054994
VM / NO - DA	2-1/2 - 4	054995

Protection cap included for VM. \*Actuator must have the metal cap.

#### Stroke Limiter w/ Optical Position Indicator

	Ð	4	L	
	D			
1	싞	2	2	
1	11	i	ĩ	
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	8			
	2	s		

VM / NC	1/2 - 1	054999
VM / NC	1-1/4 - 1-1/2	053063
VM / NC	2	053064
*VM / NC	2-1/2 - 4	053065
VM / NO - DA	1/2 - 2	053066
VM / NO - DA	2-1/2 - 4	053067

Protection cap included for VM. \*Actuator must have the metal cap.

Valve Series	Size inches	Product Code
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Stroke Limiter w/ Optical Position Indicator & Manual Override

	VM / NC
	VM / NC
	VM / NO - DA
1	VM / NO - DA
	Protection cap

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V

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VM / NC	1/2 - 1	053069
VM / NC	1-1/4 - 2	053071
VM / NO - DA	1/2 - 1	053072
VM / NO - DA	1-1/4 - 2	053073

p included for VM.

#### Electrical Position Indicator - 1 Mechanical Switch

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1	5	
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CM / NC	1/2	054952
VM / NC	1/2 - 1	054953
VM / NC	1-1/4 - 1-1/2	054954
VM / NC	2	054955
VM / NC	2-1/2 - 4	054956
/M Manual*	1/2 - 1	054962
/M Manual*	1-1/4 - 1-1/2	054963
/M Manual*	2	054964
/M Manual*	2-1/2 - 3	054965
/M Manual*	4	054966

\* Special machining needed for the valve bonnet and compressor.

#### Microswitch Box - 2 Electromechanical Switches

B	
818	
EB .	

•	Switton Dox	Z LICCUOMCCM	
	VM / NC	1/2 - 1-1/2	054967
	VM / NC	2 - 4	054968
	VM / NO	1/2 - 4	054969



Microswitch Box - 2 Inductive Switches

		iteries
VM / NC	1/2 - 1-1/2	054970
VM / NC	2 - 4	054971
VM / NO	1/2 - 4	054972

#### **Compact Microswitch Box**

#### - 2 Electromechanical Switches

	VM / NC	1/2 - 1	054973	
	VM / NC	1-1/4 - 1-1/2	054974	
	VM / NC	2	054975	
	VM / NO	1/2 - 1	054976	
	VM / NO	1-1/4 - 1-1/2	054977	
la.	VM / NO	2	054978	
	CM / NC - NO	1/2	054979	

#### **Compact Microswitch Box**

- 2 Inductive Switches

VM / NC	1/2 - 1	054980
VM / NC	1-1/4 - 1-1/2	054981
VM / NC	2	054982
VM / NO	1/2 - 1	054983
VM / NO	1-1/4 - 1-1/2	054984
VM / NO	2	054985
CM / NC - NO	1/2	054986

#### SXE SERIES BALL CHECK VALVES

The SXE is a complement to the VXE ball valve product line with many of the same features providing trouble free service for industrial, OEM and water service applications. A true union design allows for simple maintenance, while the EasyFit multifunction handle can be used as a tool for ball seal carrier adjustment, and for tightening union nuts precisely. The internal design is optimized for maximum flow and minimum turbulence, preventing ball sticking and chatter. Just a few psi of back pressure is required for positive shutoff in both vertical and horizontal installations. The SXE is available in PVC and CPVC with either EPDM or FPM seals.

Pressure: 232 psi at 73°F Sizes: 1/2" – 4"



End Connection	Size inches	EPDM Product Code	FPM Product Code
PVC			
S/T	1/2	052013	052022
S/T	3/4	052014	052023
S/T	1	052015	052027
S/T	1-1/4	052016	052028
S/T	1-1/2	052017	052030
S/T	2	052018	052120
Socket	2-1/2	052478	052481
Socket	3	052479	052482
Socket	4	052480	052483
CPVC			
S/T	1/2	052121	052127
S/T	3/4	052122	052128
S/T	1	052123	052133
S/T	1-1/4	052124	052134
S/T	1-1/2	052125	052135
S/T	2	052126	052136
Socket	2-1/2	052484	052487
Socket	3	052485	052488

052486

052489

Check valves should be used whenever there is a need to prevent back-flow of process media. This may be when two incompatible fluids cannot be allowed to mix, or when reverse flow would cause undesirable drainage of a system line or tank. Many styles exist including: simple ball checks, heavy duty swing checks, and highly efficient piston checks. These valves are typically gravity operated and require very little back pressure to seal. Air release valves safely allow any entrapped air or gas to escape, avoiding damage to the piping system.

Socket

Δ

#### SSE SERIES SPRING ASSISTED CHECK VALVES



The all new SSE complements our SXE ball check valves, which introduce an advanced method of installation, providing trouble free service for industrial, OEM and water service applications. The internal profile of the SSE, combined with the spring assisted

contoured ball, gives the advantage of trouble-free vertical and horizontal installations, even if only very low back pressure is available. The innovative SSE EasyFit design features a custom labelling system, and the optional EasyFit multifunctional handle allows for union nut rotational control and safe blocked carrier tightening. The SSE is available in PVC with a standard 316SS spring and either EPDM or FPM seals. The spring is also

End Connection	Size inches	EPDM Product Code	FPM Product Code
PVC			
S/T	1/2	052490	052499
S/T	3/4	052491	052500
S/T	1	052492	052501
S/T	1-1/4	052493	052502
S/T	1-1/2	052494	052503
S/T	2	052495	052504
Socket	2-1/2	052496	052505
Socket	3	052497	052506
Socket	4	052498	052507

available in PTFE encapsulated 316SS and Hastelloy, depending on the size.

Pressure:	232 psi at 73°F
Sizes:	1/2" – 4"

#### **VR SERIES PISTON CHECK VALVES - TRUE UNION, Y-PATTERN**

The VR features an all PVC construction of high performance components. This Y-pattern valve will perform equally as well in both vertical and horizontal orientations. With an increased flow rate yet low-return pressure positive seal, and top-entry maintenance, our VR piston check valve far exceeds the limited performance of other popular check valves. Both EPDM and FPM seals are available.

Pressure:	up to 232 psi depending on the size
Sizes:	1/2" - 4"



End Connection	Size inches	EPDM Product Code	FPM Product Code
PVC			
S/T	1/2	053346	053289
S/T	3/4	053347	053290
S/T	1	053348	053291
S/T	1-1/4	053349	053292
S/T	1-1/2	053350	053293
S/T	2	053351	053294

PVC			
Flanged	1/2	053879	053885
Flanged	3/4	053880	053886
Flanged	1	053881	053887
Flanged	1-1/4	053882	053888
Flanged	1-1/2	053883	053889
Flanged	2	053884	053890

End Size	EPDM
Connection inches	Product Code

#### **PVC, NOT True Union**

Threaded	3	053352
Threaded	4	053353
Socket	3	053295
Socket	4	053296
Flanged	3	053925
Flanged	4	053926

#### SC SERIES SWING CHECK VALVES

The SC combines superior flow rate with maximum versatility. With stainless wetted parts and hardware, top entry design, and extremely low back pressure requirements, these flanged valves are the perfect choice for back-flow prevention in large diameter lines, both vertical and horizontal. The SC is available in PVC with either EPDM or Viton<sup>®</sup> seals.

 $\begin{array}{ll} \mbox{Pressure:} & \mbox{up to 100 psi at 73}^{\circ}\mbox{F depending on the size} \\ \mbox{Sizes:} & \mbox{3}^{"}-8^{"} \end{array}$ 

End Connection	Size inches	EPDM Product Code	Viton® Product Code
PVC			
Flanged	3	052289	053875
Flanged	4	052290	053876
Flanged	6	052291	053877
Flanged	8	052292	053878



#### VA SERIES AIR RELEASE VALVES - SINGLE UNION

The VA is one of only two such plastic valves in the industry, and the only one controlled by media and not pressure. Designed for tanks, slurries, or start-ups, the VA valve will economically and efficiently eliminate air or gas pockets as well as break potentially dangerous vacuums. This no-spill valve is offered in PVC with EPDM seals. FPM sealing kits are also available.

Pressure: 232 psi Sizes: 3/4", 1-1/4" and 2"



Size inches	EPDM Product Code
PVC, Single Union	
3/4	053559
1-1/4	053560
2	053561

Note: Valves supplied with dual (socket & threaded) end connectors for the exhaust port

Size Product Code	Size inches	Product Code
-------------------	----------------	--------------

#### Viton<sup>®</sup> O-ring Set

153845
153846
153847

#### **RV SERIES SEDIMENT STRAINERS - TRUE UNION - Y PATTERN**

The RV Y-pattern strainer protects critical pipeline components by removing solids and suspended impurities. Clear PVC construction allows for inspection of the screen while in service, whereas the bottom-entry design permits maintenance on the valve while in-line. The RV is available with either EPDM or FPM seals, as well as in Corzan<sup>®</sup> CPVC.

Pressure: up to 150 psi depending on the size Sizes: 1/2" - 4"



#### **RV** Series Sediment Strainer Replacement Screens

Size Inches	Product Code	Size Inches	Product Code
PVC 18 Mes	sh - 3/32"	PVC 30 Mes	sh - 5/64"
1/2	053947	1/2	053955
3/4	053948	3/4	053956
1	053949	1	053957
1-1/4	053950	1-1/4	053958
1-1/2	053951	1-1/2	053959
2	053952	2	053960
3	053953	3	053961
4	053954	4	053962
PVC 35 Mes	sh - 1/32"	PVC 50 Mes	sh - 3/64"
1/2	053963	1/2	053971
3/4	053964	3/4	053972
1	053965	1	053973
1-1/4	053966	1-1/4	053974
1-1/2	053967	1-1/2	053975
2	053968	2	053976
3	053969	3	053977
4	053970	4	053978
SS 35 Mest	ı - 1/32"	PP 30 Mesh	ı - 1/16"
1/2	053979	1/2	053332
3/4	053980	3/4	053340
1	053981	1	053341
1-1/4	053982	1-1/4	053342
1-1/2	053983	1-1/2	053343
2	053984	2	053344
3	053985	3	-
4	053986	4	-

End	Size	EPDM	FPM
Connection	inches	Product Code	Product Code

#### Clear PVC True Union, w/PVC 35 Mesh Screen

S/T	1/2	053261	053233
S/T	3/4	053262	053234
S/T	1	053263	053235
S/T	1-1/4	053264	053236
S/T	1-1/2	053265	053237
S/T	2	053266	053238

#### Clear PVC True Union, w/PVC 35 Mesh Screen

Flanged	1/2	053935	053941
Flanged	3/4	053936	053942
Flanged	1	053937	053943
Flanged	1-1/4	053938	053944
Flanged	1-1/2	053939	053945
Flanged	2	053940	053946

End	Size	FPM
Connection	inches	Product Code
CONNECTION	IIICHES	FIGURE CORE

#### CPVC True Union, w/PP 30 Mesh Screen

S/T	1/2	053334
S/T	3/4	053335
S/T	1	053336
S/T	1-1/4	053337
S/T	1-1/2	053338
S/T	2	053339

End	Size	EPDM	FPM
Connection	inches	Product Code	Product Code
Connection	menes	FIGUACI COUE	Product Code

#### Clear PVC NOT True Union, w/PVC 35 Mesh Screen

Threaded	3	053267	053239
Threaded	4	053268	053240
Socket	3	053211	054012
Socket	4	053212	054013
Flanged	3	054020	054028
Flanged	4	054021	054029

Sizes	Hole Pitch	ļ	Availability	y
ASTM Mesh	inches	PVC	SS	PP
18 Mesh	0.098	Х	-	-
20 Mesh	0.060	-	-	Х
30 Mesh	0.079	-	-	Х
30 Mesh	0.059	Х	-	-
35 Mesh	0.040	Х	Х	-
50 Mesh	0.028	Х	-	-

#### S12/22 SERIES SOLENOID VALVES - TRUE UNION, NORMALLY CLOSED, 110 VAC

The S12/22 Series replaces the well-received SF Series with a number of new features and is designed for industrial, OEM and water service applications. The S12/22 is direct acting, 2 way-2 position flow control valve, ideal for precise control and high-cycle service. The new high performance electric solenoid actuator has been redesigned to exceed 5 million cycles without having to perform maintenance and a 100% duty cycle means no issues with overheating or "burnout". With their lever type shutter design, standard manual override, and LED position indicator, these valves will outlast and outperform more conventional diaphragm-style solenoid valves. The S12/22 is available in PVC and either EPDM or FPM seals.

Pressure: up to 90 psi at 73°F Sizes: 1/4" and 1/2"



Size inches	EPDM Product Code	FPM Product Code
1/4	353687	353711
1/4	353688	353712
1/4	353689	353713
1/2	353696	353722
1/2	353709	353721
1/2	353710	353720
	inches	inches         Product Code           1/4         353687           1/4         353688           1/4         353689           1/2         353696           1/2         353709

#### **PVC FNPT Threaded**

0.16	1/4	353723	353699
0.24	1/4	353724	353698
0.31	1/4	353725	353697
0.31	1/2	353734	353708
0.39	1/2	353733	353707
0.59	1/2	353732	353706

Note: 3/8" valves available on request

3-way valves and other voltages are available on request.

#### **VV ANGLE SEAT VALVE - TRUE UNION, Y-PATTERN**

Sizes: 1/2 - 2""



Connection inches Product Code
--------------------------------

#### PVC, True Union w/ PTFE Gland Packing

,		0
S/T	1/2	253869
S/T	3/4	253870
S/T	1	253871
S/T	1-1/4	253872
S/T	1-1/2	253873
S/T	2	253874

Note:  $\mathsf{Viton}^{\circledast}$  sealing sets are available on request, please contact customer service.

#### LV SERIES LAB VALVES WITH FNPT, MNPT AND HOSE CONNECTORS

The LV is a versatile PVC quarter turn product supplied with an assortment of connections that match up with many kinds of pipe or hose.

Pressure: 150 psi at 73°F Sizes: 1/4"



Product Code
MNPT & Hose Connectors
052308

# DON'T SETTLE FOR A WEAK PLAYER ON YOUR CHAMPIONSHIP TEAM

### **Join the IPEX Winning Tradition**

PIPE

#### **Our Strength:**

An all-star line-up of thermoplastic pipe, valves and fittings, designed and built to work together in any process piping application.

#### The IPEX Advantage:

Only IPEX offers a complete system of pipe, valves and fittings engineered and manufactured to IPEX's strict quality, performance and dimensional standards. With Xirtec®140 (industrial grade PVC) and Corzan® (CPVC), you can be confident that all the material you need is designed, manufactured and backed by the same company.



## QUARTER TURN AUTOMATION

#### **Quarter Turn Automation - Pneumatic / Electric**

Automation is an ideal solution for precise control of many valves in a system, when valves are remotely located, or when the process requires constant monitoring and adjustment. Pneumatic and electric actuators can be easily fitted on our ball, multi-port, and butterfly valves. Some features and functions include normally closed, normally open, or double-acting operation; corrosion resistant aluminum bodies, pre-loaded springs, and adjustable cams. Many accessories such as visual position indicators, limit switches, 3 and 4-way solenoids, and positioners are also available. For further information, please refer to the IPEX *Industrial Technical Manual Volume IX entitled*, "Quarter Turn Automation".

#### DID YOU KNOW?

The three basic control functions available through quarter turn automation are:

**1. Double Acting**– This requires external power for each stroke. For example, power to open the valve, then power to close the valve.

**2. Normally Open**– Also referred to as 'fail safe open', the default position is open and the actuator requires power to close the valve.

**3. Normally Closed**– Also referred to as 'fail safe closed', the default position is closed and the actuator requires power to open the valve.

#### PNEUMATIC ACTUATORS OVERVIEW

Pneumatic actuators are the most common choice for quarter turn plastic valves in process applications. Compressed air systems are readily available in any plant, and the cost of the actuator itself is generally lower than that of an electric unit with a comparable torque output. Typical quarter turn automation seldom requires positioning (something achieved more easily with an electric

actuator), therefore the cycle life of a pneumatic unit will be substantially greater, and will be intrinsically safer than an electric actuator in volatile environments. While there are many different kinds of pneumatic actuators, a rack and pinion style is the preferred choice within the plastic piping industry. This type of actuator is quite tough and rugged, and has a high cycle life. They generally have a compact, simple construction, and certain models can be quite light in weight. The design also allows the same basic actuator to be used as a double acting or (with minor additions) a spring return unit.

#### ELECTRICAL ACTUATORS OVERVIEW

Although slightly more expensive than pneumatics, electric actuators have certain desirable benefits. They are the preferred choice when cycle time is an issue, as a quick closing pneumatically actuated valve could cause a damaging pressure surge condition (water hammer). The use of an electric actuator may also be preferred when the distance from the power source is considerable. The friction losses in long runs of compressed air line may result in reduced efficiency and/or additional compressor stations. In addition, electric actuators are the preferred (if not the only) choice when a quarterturn valve like a multi-port is used. In this case, it is possible that the travel required is not just 0° to 90° but 0° to 90° to 180°. A rack and pinion actuator would need four separate pistons and a multiplicity of related air chambers, whereas this is easily accomplished with an electric unit. Most electric actuators have a cam/limit switch arrangement which allows the unit to be set up for a variety of rotations. The two standard limit switches can be used to provide a remote location with an open or closed signal. A multitude of voltages both for AC and DC current are also typically available.

#### VKD SERIES BALL VALVE - TRUE UNION, PNEUMATIC - DOUBLE ACTING



End Connection	Size inches	EPDM Product Code	Viton® Product Code
/C w PTFE	Seats		
S/T	1/2	253296	253305
S/T	3/4	253297	253306
S/T	1	253298	253307
S/T	1-1/4	253299	253308
S/T	1-1/2	253300	253309
S/T	2	253301	253310
Socket	2-1/2	253302	253311
Socket	3	253303	253312
Socket	4	253304	253313

End Connection	Size inches	EPDM Product Code	Viton® Product Code
Corzan® CP	VC w PTF	E Seats	
S/T	1/2	253314	253323
S/T	3/4	253315	253324
S/T	1	253316	253325
S/T	1-1/4	253317	253326
S/T	1-1/2	253318	253327
S/T	2	253319	253328
Socket	2-1/2	253320	253329
Socket	3	253321	253330
Socket	4	253322	253331

#### Pneumatic - Spring Return, Normally Open

#### **PVC w PTFE Seats**

S/T	1/2	253368	253377
S/T	3/4	253369	253378
S/T	1	253370	253379
S/T	1-1/4	253371	253380
S/T	1-1/2	253372	253381
S/T	2	253373	253382
Socket	2-1/2	253374	253383
Socket	3	253375	253384
Socket	4	253376	253385

#### **Pneumatic - Spring Return, Normally Open**

#### **Corzan® CPVC w PTFE Seats**

S/T	1/2	253386	253395
S/T	3/4	253387	253396
S/T	1	253388	253397
S/T	1-1/4	253389	253398
S/T	1-1/2	253390	253399
S/T	2	253391	253400
Socket	2-1/2	253392	253401
Socket	3	253393	253402
Socket	4	253394	253403

#### Pneumatic - Spring Return, Normally Closed

#### **PVC w PTFE Seats**

S/T	1/2	253332	253341
S/T	3/4	253333	253342
S/T	1	253334	253343
S/T	1-1/4	253335	253344
S/T	1-1/2	253336	253345
S/T	2	253337	253346
Socket	2-1/2	253338	253347
Socket	3	253339	253348
Socket	4	253340	253349

#### **Pneumatic - Spring Return, Normally Closed**

#### **Corzan® CPVC w PTFE Seats**

S/T	1/2	253350	253359
S/T	3/4	253351	253360
S/T	1	253352	253361
S/T	1-1/4	253353	253362
S/T	1-1/2	253354	253363
S/T	2	253355	253364
Socket	2-1/2	253356	253365
Socket	3	253357	253366
Socket	4	253358	253367

#### VKD SERIES BALL VALVE - ELECTRIC - DOUBLE ACTING, 110 VAC



End Connection	Size inches	End Connection	Size inches
PVC w PTFE Se	eats	Corzan® CPV	C w PTFE Seats
S/T	1/2	S/T	1/2
S/T	3/4	S/T	3/4
S/T	1	S/T	1
S/T	1-1/4	S/T	1-1/4
S/T	1-1/2	S/T	1-1/2
S/T	2	S/T	2
Socket	2-1/2	Socket	2-1/2
Socket	3	Socket	3
Socket	4	Socket	4

For electric valve actuation, you must order three separate components.

**Contact IPEX Sales for** assistance.

#### TKD SERIES 3-WAY BALL VALVE - TRUE UNION, PNEUMATIC - DOUBLE ACTING

Viton®

253750

253751

253752

253753

253754

253755

EPDM



Connection	inches	Product Code	Product Code
VC w PTFE	Seate 1	Port	
VC W FIFE	Seals, L-	FUIL	
S/T	1/2	253791	253797
S/T	3/4	253792	253798
S/T	1	253793	253799
S/T	1-1/4	253794	253800
S/T	1-1/2	253795	253801
S/T	2	253796	253802

Pneumatic - Spring Return, Normally Open

253744

253745

253746

253747

253748

253749

Size

#### End Size **EPDM** Viton® Product Code Product Code Connection inches **PVC w PTFE Seats, T-Port** S/T 1/2 253803 253809 S/T 3/4 253804 253810 S/T 1 253811 253805 S/T 1-1/4 253806 253812

253807

253808

253813

253814

#### Pneumatic - Spring Return, Normally Open

1-1/2

2

#### **PVC w PTFE Seats, T-Port**

S/T

S/T

S/T	1/2	253756	253762
S/T	3/4	253757	253763
S/T	1	253758	253764
S/T	1-1/4	253759	253765
S/T	1-1/2	253760	253766
S/T	2	253761	253815

#### **Pneumatic - Spring Return, Normally Closed**

#### **PVC w PTFE Seats, L-Port**

**PVC w PTFE Seats, L-Port** 

1/2

3/4

1

1 - 1/4

1 - 1/2

2

End

S/T

S/T

S/T

S/T

S/T

S/T

S/T	1/2	253767	253773
S/T	3/4	253768	253774
S/T	1	253769	253775
S/T	1-1/4	253770	253776
S/T	1-1/2	253771	253777
S/T	2	253772	253778

#### **Pneumatic - Spring Return, Normally Closed**

#### **PVC w PTFE Seats, T-Port**

	-		
S/T	1/2	253779	253785
S/T	3/4	253780	253786
S/T	1	253781	253787
S/T	1-1/4	253782	253788
S/T	1-1/2	253783	253789
S/T	2	253784	253790

#### TKD SERIES 3-WAY BALL VALVE - ELECTRIC - DOUBLE ACTING, 110 VAC

	Size ches	End Connection i	Size nches	
PVC w PTFE Seats, L-	-Port P	VC w PTFE Seats,	T-Port	For electric valve
S/T 1.	./2	S/T	1/2	actuation, you must orde
S/T 3.	3/4	S/T	3/4	three separate
S/T	1	S/T	1	components.
S/T 1-	1/4	S/T	1-1/4	
S/T 1-	1/2	S/T	1-1/2	Contact IPEX Sales for
S/T	2	S/T	2	assistance.

Note: Customer must specify 'open' and 'closed' positions for 3-way actuated valves. See technical manual for details. Electric actuators can be configured for either 90° or 180° operation.

# QUARTER TURN AUTOMATION

#### **FK SERIES BUTTERFLY VALVE - DOUBLE ACTING**



Size inches	EPDM Product Code	Viton® Product Code
PP Disc, Wafeı	style	
1-1/2	253536	253546
2	253537	253547
2-1/2	253538	253548
3	253539	253549
4	253540	253550
5	253541	253551
6	253542	253552
8	253543	253553
10	253544	253554
12	253545	253555

Size inches	EPDM Product Code	Viton® Product Code
PP Disc, SS Lu	Igs	
2-1/2	253556	253564
3	253557	253565
4	253558	253566
5	253559	253567
6	253560	253568
8	253561	253569
10	253562	253570
12	253563	253571

#### Pneumatic - Spring Return, Normally Open

#### PP Disc, Wafer Style

-	-	
1-1/2	253608	253618
2	253609	253619
2-1/2	253610	253620
3	253611	253621
4	253612	253622
5	253613	253623
6	253614	253624
8	253615	253625
10	253616	253626
12	253617	253627

#### Pneumatic - Spring Return, Normally Open

PP Disc, SS Lugs		
2-1/2	253628	253636
3	253629	253637
4	253630	253638
5	253631	253639
6	253632	253640
8	253633	253641
10	253634	253642
12	253635	253643

#### **Pneumatic - Spring Return, Normally Closed**

#### PP Disc, Wafer Style

	-	
1-1/2	253572	253582
2	253573	253583
2-1/2	253574	253584
3	253575	253585
4	253576	253586
5	253577	253587
6	253578	253588
8	253579	253589
10	253580	253590
12	253581	253591

#### **Pneumatic - Spring Return, Normally Closed**

**PP Disc, SS Lugs** 

	0			
2-1/2		253592	253600	
3		253593	253601	
4		253594	253602	
5		253595	253603	
6		253596	253604	
8		253597	253605	
10		253598	253606	
12		253599	253607	

#### FK SERIES BUTTERFLY VALVES - ELECTRIC - DOUBLE ACTING, 110 VAC



Size inches	Size inches	
PP Disc, Wafer Style	PP Disc, SS Lugs	For electric valve
1-1/2	2-1/2	actuation, you must or
2	3	three separate
2-1/2	4	components.
3	5	
4	6	Contact IPEX Sales for
5	8	assistance.
6		
8		

Note: PVC, CPVC, ABS, and PVDF discs are available on request 10" and 12" electrically actuated butterfly valves are available on request.

#### FE SERIES BUTTERFLY VALVE PNEUMATIC - DOUBLE ACTING

Cing	

Size inches	EPDM Product Code
PVC Body & Disc, Waf	er Style
1-1/2	253680
2	253681
2-1/2	253682
3	253683
4	253684
5	253685
6	253686
8	253687
10	253688
12	253689

Size	EPDM
inches	Product Code

#### Pneumatic - Spring Return, Normally Open

#### PVC Body & Disc, Wafer Style 1-1/2 253700 2 253701 2-1/2 253702 3 253703 4 253704 5 253705 6 253706 8 253707 10 253708 12 253709

Note: NBR and  $\mathsf{Viton}^{\circledast}$  lined values are available on request

#### Pneumatic - Spring Return, Normally Closed

#### PVC Body & Disc, Wafer Style

1-1/2	253690
2	253691
2-1/2	253692
3	253693
4	253694
5	253695
6	253696
8	253697
10	253698
12	253699

#### FE SERIES BUTTERFLY VALVE ELECTRIC - DOUBLE ACTING, 110 VAC

120

PV

	Size inches		
ody &	Disc,	Wafer	Style
	1-1/2		
	2		
	2-1/2		
	3		
	4		
	ody &	inches addy & Disc, 1-1/2 2 2-1/2	inches ody & Disc, Wafer 1-1/2 2 2-1/2

5

6

8

For electric valve actuation, you must order three separate components.

Contact IPEX Sales for assistance.

 $10^{\mbox{\tiny "}}$  and  $12^{\mbox{\tiny "}}$  electrically actuated butterfly valves are available upon request.

#### PNEUMATIC ACTUATOR ACCESSORIES

NEMA 4/4X

Component	Product
Style	Code

#### Pilot Solenoids - 110 VAC, 3/4-Way



NEMA 7/9 253056 Note: Pilot solenoids meet NAMUR mounting

253055

specifications. Other voltages available.

#### Limit Switches - NEMA 4/4X



Mechanical	253057
Proximity	253058

Note: Limit switches include universal mounting brackets (ISO 5211)

#### **Positioners**

2	
1	4
	4 -

3-15 psi	253061
4 - 20 mA	253059
4 - 20 mA, w/ limit switch (LS)	253816
4 - 20 mA, w/ position transmitter (PT)	253817
4 - 20 mA, w/ LS & PT	253818
4 - 20 mA, I-safe	253062

Note: All positioners include universal mounting brackets (ISO 5211) and gages.

Several other positioners available, including Intrinsically Safe, Explosion proof, Smart, Stainless Steel and High Vibration models, with limit switch and position transmitter options. Please contact IPEX for more information.

#### Other



Sandwich Declutch. Gearbox ISO 5211	253819
Muffler - Brass/Bronze	253065
Speed Control - Brass/Bronze	253066

Note: Declutchable gearbox has MAXIMUM torque rating of 2600 in-lbs. For higher torque values, please contact IPEX for larger size gearbox models.

#### **MOUNTING ACCESSORIES**

Inches Detail Code		Size nches	Mounting Detail	Product Code
--------------------	--	---------------	--------------------	-----------------

#### VKD & TKD Series Ball Valve Mounting Kit

1/2	F03 / F04 / 11mm	154048
3/4	F04 / 11mm	154049
 3/4	F03 / F05 / 11mm	154050
1	F04 / 11mm	154051
1	F03 / F05 / 11mm	154052
1-1/4	F05 / F07 / 11mm	154182
1-1/4	F05 / F07 / 14mm	154053
1-1/2	F05 / F07 / 11mm	154183
1-1/2	F05 / F07 / 14mm	154054
2	F05 / F07 / 11mm	154174
2	F05 / F07 / 14mm	154055
2-1/2 - 4 (VKD)	F05 / F07	153001

#### **VX Series Ball Valve Mounting Kit**

1	
	1

-042
-043
044
045
046
-047

#### **Spacer Plate for FK**



Series B	utterfly Valves	
1-1/2 - 6	F05 / F07	153001
8	F10	153002

#### **Square Stem Adapter**



hrei		
0.43 x 0.35	11mm x 9mm	253048
0.55 x 0.43	14mm x 11mm	253049
0.67 x 0.43	17mm x 11mm	253050
0.67 x 0.55	17mm x 14mm	253051
0.87 x 0.67	22mm x 17mm	253052
1.06 x 0.87	27mm x 22mm	253053
1.42 x 1.06	36mm x 27mm	253054

## There are pipe and fittings...

## and then there are valves

IPEX offers one of the most comprehensive ranges of high quality, high performance thermoplastic valves and actuation products available today. With more than 65 years of design and manufacturing experience, our lightweight, long life, maintenance free valves will save you time and money.

IPEX thermoplastic valves are part of our complete systems of pipe, fittings and

valves engineered and manufactured to IPEX's strict quality, performance and dimensional standards. With Xirtec®140 (industrial grade PVC) and Corzan® (CPVC), you can be confident that all the material you need is designed, manufactured and backed by the same company.

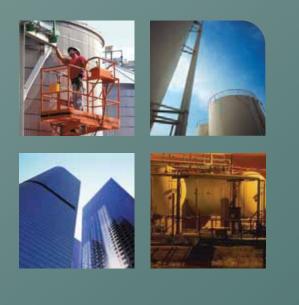
Xirtec®140 and Corzan® high-performance systems feature outstanding resistance to photodegradation, creep stress and immunity to oxidation and are exceptionally suited for use with a wide range of acids, alcohols, salts and halogens. The perfect long service/low maintenance alternative to common and exotic metal systems.

Also, our network of manufacturing and customer service facilities across North America ensures fast, reliable service and expert technical support. 1) IPEX's highly chemically resistant PVC ventilation duct systems feature seamless pipe for greater flow rates. Their light weight allows for easier handling on the job, which means lower installation costs.

2) For applications where quick assembly is required under adverse conditions, IPEX offers factory-grooved PVC pipe designed to mate easily with mechanical grooved couplings.

3) And, IPEX well casings offer corrosion-resistant, maintenance-free protection for well-drop-pipe and submersible pumps.

# Specialty Products



Ventilation Duct	124
Well Casings	126
Grooved PVC Pipe	127

## SPECIALTY PRODUCTS

## **Ventilation Duct**

PVC & CPVC Exhaust System Ducting

IPEX PVC & CPVC exhaust system ducting provides effective solutions for industrial ventilation systems, protecting workers and the environment from contaminated air.

#### STANDARDS



ASTM D1784 CAN/ULC S102.2

#### PVC ADVANTAGES

- PVC cell class 12454 as per ASTM D1784
- 2) Extruded seamless PVC duct in all standard diameters 6" through 24"
- 3 For use in industrial and institutional fume handling systems requiring high resistance to corrosive vapors
- 4 Ideal for plating, metal finishing and laboratory installations

- (5) Low installed cost as compared to noncorrosive metallics
- (6) Light weight allows longer runs and speeds installation with simple tools and piping techniques
- 7 Low maintenance requirements over extended service periods
- 8 Low flame spread rating of 10 as per CAN/ULC \$102.2

#### CPVC ADVANTAGES

- 1) Extruded seamless CPVC duct in all standard diameters 6" through 16"
- (2) CPVC withstands exhaust temperatures up to 200°F
  - ) CPVC cell class 23447 as per ASTM 1784
- 4 CPVC is inert to most mineral acids, bases, salts, and aliphatic hydrocarbons, and compares favorably to other non-metals in corrosive chemical environments.
- 5 Ideal for chemical processing, semiconductor fabrication, metal plating & finishing, pulp & paper, waste water treatment plants, and laboratory installations

- (6) Low installed cost as compared to noncorrosive exotic metal systems and PVDF
- (7) Light weight allows for ease of handling and installation and reduces transportation and labor costs
- 8 Low maintenance requirements over extended service periods
- (9) Low flame spread rating of 10 and smoke development classification of 25 as per CAN/ULC \$102.2
- (10) Corzan<sup>®</sup> CPVC compound meets and is listed FM 4910 "Clean Room Materials Flammability Test Protocol" approval standard

Duct Size Diameter (in x ft)	Product Code	Average O.D. (in.)	Average I.D. (in.)	Average Wall Thickness (in.)	PVC Weight (lbs/ft)	CPVC Weight (lbs/ft)
6 x 20	046700	6.625	6.251	0.187	2.319	2.519
8 x 20	046702	8.625	8.251	0.187	3.040	3.301
10 x 20	046704	10.750	10.376	0.187	3.805	4.133
12 x 20	046706	12.750	12.376	0.187	4.528	4.916
14 x 20	046707	14.000	13.626	0.187	4.978	5.405
16 x 20	046708	16.000	15.626	0.187	5.697	6.188
18 x 20	046709	18.000	17.626	0.187	6.420	_
20 x 20	046711	20.000	19.500	0.250	9.515	-
24 x 20	046713	24.000	23.500	0.250	11.442	_

#### **Duct Dimensions**

10' lengths available upon request. These products are for atmospheric venting only. Do not use in pressurized air or gas systems. CPVC Duct is only available up to 16" diameter.

NSF-dwv ASTM F 480-91 NSF-wc Well Casing IC-0

# PVC Well Casing IC-0

IPEX bell end PVC well casing provides corrosion-resistant, maintenance-free protection for well drop-pipe and submersible pumps. Its light weight facilitates installation with conventional tools and piping techniques. It is manufactured to ASTM standards and is available throughout North America from IPEX's fully stocked service centers.

ASTM D2665



ASTM D1784, ASTM D1785, ASTM F480 ASTM D2665 - Sch 40 pipe only

#### ADVANTAGES

11 CU SCH 40 ASTM 02665

- (1) Meets ASTM D1784, D1785, D2665 (Sch 40 pipe only) and F480 specifications.
- 2 Third-party certified by NSF.
- 3 Solvent weld joints are strong and water tight.
- (4) Installation can be accomplished with lighter setting equipment than is required for metallic piping.
- **5** Electrically non-conductive which reduces job site work hazards.
- **(6)** Non-toxic and non-leaching with excellent chemical resistance.
- (7) Available in bell end 2" 16" or plain end for threading 2" 12".

#### Dimensions for Xirtec140 PVC Well Casing Pipe – ASTM F480

Pipe Size	Product	Outside	e Diameter (in.)	Minimun	n Wall Thickn	ess (in.)	Bell Length
(in.)	Code	Average	Tolerance on Avg	SDR21	Sch 40	Sch 80	(in.)
2	022620	2.375	±0.006	0.113	0.154	0.218	4.000
2-1/2	022625	2.875	±0.007	0.137	0.203	0.276	5.000
3	022630	3.500	±0.008	0.167	0.216	0.300	5.500
4	022640	4.500	±0.009	0.214	0.237	0.337	6.500
5	022650	5.563	±0.010	0.265	0.258	0.375	6.000
6	022660	6.625	±0.011	0.316	0.280	0.432	8.000
8	022680	8.625	±0.015	0.410	0.322	0.500	7.000
10	022690	10.750	±0.015	0.511	0.365	0.593	7.500
12	022692	12.750	±0.015	0.606	0.406	0.687	8.500
14	022694	14.000	±0.020	0.667	0.437	0.750	9.000
16	022696	16.000	±0.020	0.762	0.500	0.843	10.000

## **Grooved PVC Pipe**

IPEX PVC pipe can be roll or cut-grooved at each end for quick connection using mechanical couplings specifically designed for PVC pipe. This method can be used in any application where PVC pipe is acceptable and where it is desirable to have a means for quick assembly under adverse conditions.

#### ADVANTAGES

- Completely re-usable pressure system that does not require threading, solvent welding, or flanging.
- 2 Joints are mechanically locked to produce a secure, leak-tight connection under pressure or vacuum. (See coupling manufacturer's product information for details on pressure capabilities.)
- (3) A union at every joint allows for speed and ease of assembly and field maintenance.
- (4) In abrasive applications, pipe can easily be rotated to distribute wear evenly.
- (5) Flexible system permits laying on rough or uneven terrain.
- 6 When using a gasket-type coupler, each joint will absorb some expansion and contraction due to temperature changes.
- 7 Grooved systems facilitate fast add-ons, modifications or re-location of the pipe.

20 SCH 80 370 PSI @ 73°F

#### DID YOU KNOW?

For more information on our Specialty



Products, you can download our Vinyl Process Piping Systems Technical Manual quickly and easily. Just go to our website: www.ipexinc.com.

#### Recommended Piping for Roll Grooved Joints

Piping Material PVC Sch 40	Pipe Size (inches)	Piping Material PVC Sch 80
22686	2	85194
22688	3	85200
22706	4	85201
22712	6	85202
22714	8	85203
22730	10	85204
22716	12	85205

Consult an IPEX representative for detailed design considerations

GROOVED PVC PIPE

3 PVC 1120 SCH 80 37

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## **MUNICIPAL** PRODUCT OVERVIEW

#### Blue Brute<sup>®</sup> CIOD 4" - 12" (100mm - 300mm)

AWWA C900 pressure pipe and fittings.





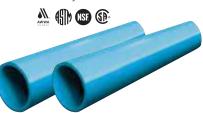
Cycle Tough® 1/2" – 24" (12mm – 600mm) IPSOD PVC pressure pipe and fittings for irrigation and force main applications. 👭 🚯 🚱 🕪 🚯 🐵

## PRESSURE PIPING SYSTEMS

**BIONAX®** 4" - 18" (100mm - 450mm)

NEW SIZES 14", 16 & 18"

AWWA C909 molecularlyenhanced PVC pipe designed for watermains, sewage forcemains, irrigation lines and industrial process piping. Made from biaxially-oriented PVC.



#### **IPEX Fusible**<sup>™</sup> 4" - 36" (100mm - 900mm)

Fusible Brute<sup>™</sup> (CIOD) and Fusible Series<sup>™</sup> (IPS) pipes are monolithic, fully restrained PVC pipe systems for trenchless or direct bury applications.



129

TerraBrute<sup>®</sup> CR 4" - 12" (100mm - 300mm) Nonmetallic AWWA C900 PVC pressure pipe system for HDD applications which withstands up to 120,000 lbs of pull force.





**IPEX Centurion®** 14" - 48" (350mm - 1200mm) AWWA C905 large diameter pressure pipe and fittings.

Q-Line<sup>®</sup>

3/4" & 1" (20mm & 25mm) AWWA C903-02 composite water service tubing. M GP (II) NSFPW

#### Philmac<sup>®</sup> 3G<sup>™</sup> Valves & Fittings 1/2" - 2" (12mm - 50mm)

Water line compression fittings in CTS OD and ID Series.

SP- NSF

#### Gold901<sup>™</sup> 3/4" - 2" (20mm - 50mm) Polyethylene water service line made to CTS OD.





#### Blue904® 3/4" - 2" (19mm - 51mm) PEX water service tubing made to CTS OD (SDR 9). 🌺 🚯 🕼 🖫 🐵

WATER SERVICE **SYSTEMS** 



**Enviro-Tite®** 4" – 15" (100mm – 375mm) SDR35 and SDR28 sewer pipes made from 50% recycled material.

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**Ring-Tite**<sup>®</sup>

4" - 42" (100mm - 1050mm)

SDR35 and SDR28 sewer pipe and fittings.

(R) 🔍 🍈



Perma-Loc<sup>™</sup> 21" - 36" (525mm - 900mm) Spiral-wound PVC profile sewer pipe with fusion welded seams.

#### (R (1))



**Ultra-Rib®** 8" - 24" (200mm - 600mm)

sewer pipe and fittings.

PVC open-profile





Ultra-X2® 30" - 36" (750mm - 900mm) Dual wall PVC profile sewer pipe and fittings up to 900mm.

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#### LifeSaver®

High impact HDPE adjustment units designed to bring manhole and catchbasin castings up to the exact height of the roadway, and prevents road damage caused by infiltration.



## SPECIALTY PRODUCTS



#### **TEMPEST®** Storm Sewer **Inlet Controls** 6" sewer outlet pipe and larger

Cost-effective Inlet Control Devices that work together across a series of catch basins to limit the amount of storm water runoff that can enter a combined sewer system during a storm event.



#### Vortex Flow<sup>™</sup> Insert

Custom designed, the Vortex Flow Insert eliminates odorous emissions and minimizes corrosion in vertical sewer drops.

Blue Brute<sup>®</sup>, BIONAX<sup>®</sup>, IPEX Centurion<sup>®</sup>, IPEX Fusible<sup>™</sup>, TerraBrute<sup>®</sup> CR, Cycle Tough<sup>®</sup>, Blue904<sup>™</sup>, Q-Line<sup>®</sup>, Gold901<sup>™</sup>, Philmac<sup>®</sup> 3G<sup>™</sup>, Ultra-Rib<sup>®</sup>, Ultra-X2<sup>™</sup>, PermalLoc<sup>™</sup>, Ring-Tite<sup>®</sup>, Enviro-Tite<sup>®</sup>, Vortex Flow<sup>™</sup>, and Life Saver<sup>®</sup> are trademarks of IPEX Branding Inc.

### PLUMBING & MECHANICAL PRODUCT OVERVIEW

(SP)

AquaRise<sup>®</sup>

1/2" – 4" (12mm – 100mm) IPS SDR11 CPVC pipe, valves and fittings for hot and cold water distribution.



POTABLE

WATER



Blue904<sup>™</sup> 3/4" – 2" (19mm – 50mm) PEX water service tubing made to CTS OD (SDR 9).



with a permanent coloured stripe ID system.



Q-Line® 3/4" & 1" (20mm & 25mm) AWWA C903 composite water service tubing.

Philmac<sup>®</sup> 3G<sup>™</sup> Compression Fittings 3/4" – 2" (20mm – 50mm) ter line compression fittings

Pipe-with-the-Stripe®

Pipe with the Stripe is available in standard and CSA-certified Polyethylene,

1/2" - 2" (12mm - 50mm)

Water line compression fittings in CTS OD and ID Series sizes.

SP. NSF



System 636<sup>®</sup> Flue Gas Venting 1-1/2" – 8" (40mm – 200mm) PVC-FGV Type BH Class II A vent pipe and fittings and CPVC-FGV Type BH Class II B vent.

## GAS VENTING

XIRTEC & CORZAN

#### Xirtec 140<sup>®</sup> PVC – Corzan<sup>®</sup> CPVC 1/2" – 24" (12mm – 600mm)

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XIRTEC 140°: PVC Schedule 40 & 80 pipe and fittings systems.

**CORZAN®:** CPVC Schedule 80 pipe and fittings systems cell classification 24448 & 23447





## DWV SYSTEMS

#### Drainway® ABS DWV Systems

1-1/4" – 6" (32mm – 150mm) ABS DWV pipe and fittings. Also available in cell core.

#### Solvent Weld Sewer & Drain Piping Systems 3" – 6" (75mm – 150mm)

PVC Building Drain Sewer for sanitary, storm or septic drainage. Perforated pipe for perimeter drainage or septic fields.





#### Backwater Valves 1-1/2" – 6" (40mm – 150mm) Available in both PVC and

ABS lightweight, corrosionresistant plastic.

(f)• (NSF 🌰



#### DWV System 15<sup>®</sup> & System XFR<sup>®</sup> 1-1/2" – 24" (40mm – 600mm)

**System 15:** Drain, Waste and Vent piping for low-rise commercial or residential installation.

**System XFR:** Drain, Waste and Vent piping for high-rise commercial or residential including air plenum installations.





#### **Cements & Primers**

A complete range of cements, primers and applicators specially formulated for your pipe, valves and fittings.

## CEMENTS & PRIMERS

## FIRE PROTECTION

#### Blazemaster<sup>®</sup> Fire Sprinkler Systems 3/4" – 3" (20mm – 75mm)

CPVC Pipe & Fittings for Fire Sprinkler Systems.





Products manufactured by IPEX Inc.

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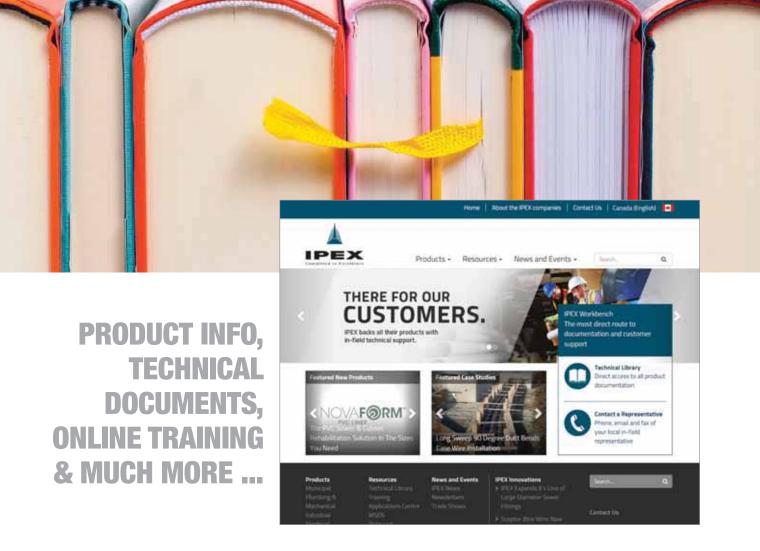
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#### **OUR TECHNICAL MANUALS INCLUDE:**

- Standards
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- Dimensions
- Pressure Ratings
- Design Calculations
- and much more ...

available at ipexna.com

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#### Call IPEX Inc Toll Free: (866) 473-9462

ipexna.com

#### About the IPEX Group of Companies

As leading suppliers of thermoplastic piping systems, the IPEX Group of Companies provides our customers with some of the world's largest and most comprehensive product lines. All IPEX products are backed by more than 50 years of experience. With state-of-the-art manufacturing facilities and distribution centers across North America, we have earned a reputation for product innovation, quality, end-user focus and performance.

Markets served by IPEX group products are:

- Industrial process piping systems
- Double containment systems
- Acid waste systems
- High purity systems
- Compressed air and inert gas piping system
- Manual and actuated thermoplastic valves
- Industrial, plumbing and electrical cements
- Electrical systems
- Telecommunications and utility piping systems
- Industrial process piping systems
- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
- Electrofusion systems for gas and water
- Irrigation systems
- PVC, CPVC, PP, PVDF, PE, ABS, and PEX pipe and fittings

#### Products are manufactured by IPEX Inc.

Valves are manufactured by FIP S.P.A. and distributed in Canada by IPEX Inc.

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Corzane is a registered trademark of the Lubrizol Corp.

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A policy of ongoing product improvement is maintained. This may result in modifications of features and/or specifications without notice.

